

OCTOBER

American FRUIT GROWER

1951



• PLANTING GUIDE •

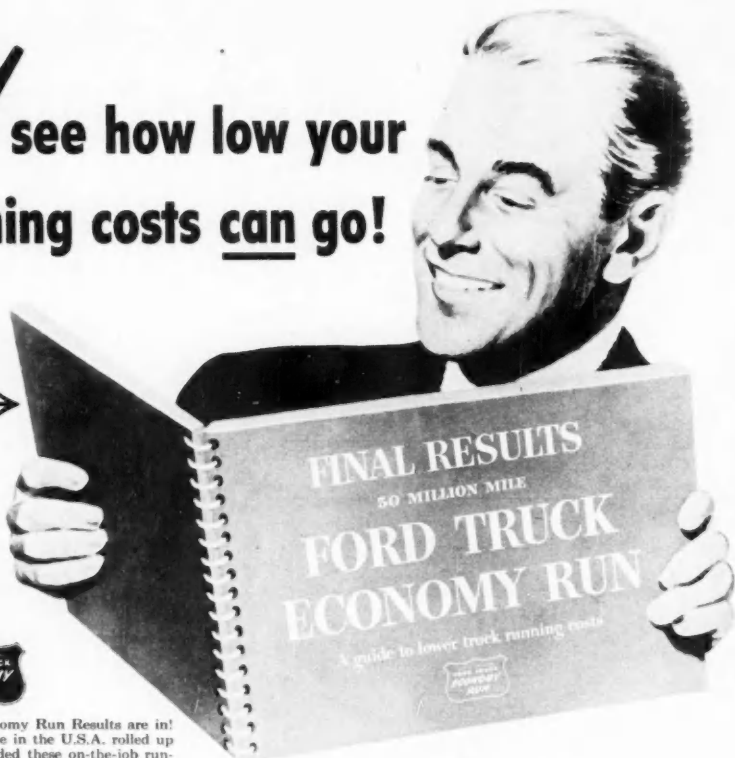
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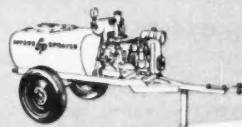
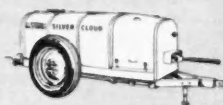


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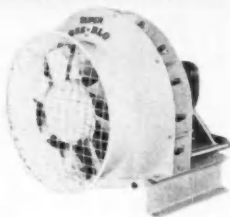
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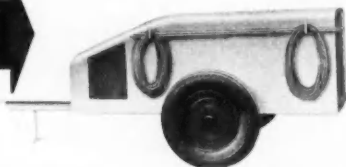
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OCTOBER
VOL. 71

1951
No. 10

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This month's cover photo by Ewing Galloway, focuses its attention on clusters of apples which are now ripening on the trees. To help boost apple sales, the National Apple Week Association has set aside October 25 to November 3 as National Apple Week.

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AMERICAN FRUIT GROWER

Published Monthly by
AMERICAN FRUIT GROWER PUBLISHING CO.
106 Euclid Ave., Willoughby, Ohio

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AMERICAN FRUIT GROWER

LETTERS TO THE EDITOR

Violante Early

Dear Editor:

We now have the most elaborate collection of dessert fruits in the East. I could write an article about a grape for the home grower that might be a boon in all the colder areas. Violante Early was brought to Vineland, Ontario by a settler from Bulgaria. The vine has tiny leaves, much like Thompson Seedless, and ripens early. It must be covered each winter. The vine fruited the third year, and is miles ahead of any grape that can be raised in colder areas of the United States. Pittsfield, Me. H. L. Palmer

Reader Palmer has ample justification for being proud of his Violante Early grapes, since it takes real skill to fruit this vinifera-type grape in Maine's cold climate. The grape has also been fruited at the Horticultural Experiment Station, Vineland, Ontario. The Seneca is a grape of the same type which we would prefer to the Violante Early, whose vines are not strong producers.—Ed.

Exchange Copies

Dear Editor:

I would very much like to receive your magazine, but owing to the dollar restrictions this is difficult. I am wondering whether you could put me in touch with one of your subscribers who would be willing to exchange monthly with the New Zealand Fruitgrower. New Zealand Norman J. Williams

Here's a chance to put your copy of AMERICAN FRUIT GROWER to good use when you have finished with it, and at the same time learn of fruit growing in New Zealand. Interested growers should write Mr. Williams, Upper Montrose, Nelson, New Zealand.—Ed.

Want Less Talk.

More Action

Dear Sir:

Since returning from the International Apple Association convention in New York and other meetings of apple growers throughout the Eastern seaboard, I feel called upon to write to you and express my concern for the apple industry as a whole.

The pessimistic attitude held by the organization which supposedly represents us does not reflect the attitude of the growers as a whole, I hope. If it does and the salvation of the apple industry is in the hands of a bulldozer as was done in the state of Washington or in the government purchase program, then this is a decadent industry and time for us all to get out.

The young in mind still have good ideas. Let us see that the directors of our state, regional, and national organizations are made to listen and if they are blind, let us open their eyes so they may see. Last year's crop has gone. Let's merchandise this year's crop with a little foresight and promotional skill.

Talking and worrying about how to make the housewife make more apple pies or apple pan dowdy is so much applesauce. The beer industry isn't interested in making the

soap men use more horns and hooves. Tell the housewife the wonders of a good, fresh, cold, crisp apple; how it is good for the teeth and for some types of cancer. Then if she wants to buy them in a consumer package or out of a vending machine, give them to her that way. After all, it is her dollar we are after.

Let us all go about our business from now on with promotion, new ideas, and salesmanship; and above all, an air of optimism. New Hampton, N.H. Cheever H. Newhall

Spartan Apple

Dear Editor:

I have fruited the Spartan apple for three or four years now. The wood is good with fair crotches, but it is not quite as hardy at the tip of the scion wood as the Victory apple from Minnesota. The color of the Spartan is as good as McIntosh; a deep red with a glossy finish. It seems fairly fruitful, yet does not bear as quickly as some varieties. I think, too, that it scabs worse than McIntosh and is inclined, on light soil, to be undersized. But the quality of the apple is wonderful, and maybe it will size better farther south.

Try the Beirsmut pear if you want a pear of wonderful quality and free from most faults, except that it has a very tender skin. It fruits a little later than the Bartlett, and is of good size and finish.

Berwick, Nova Scotia John Buchanan

Prices

Dear Sir:

Very considerable interest was expressed at a recent meeting of our British Columbia Fruit Growers Association in an article in your January issue. I refer particularly to the list of average prices received by United States growers for fresh apples in the years 1934-1950.

There was considerable difference of opinion as to what these figures really represented, whether they were net to the grower with only production costs to come off, or whether packing and container costs were included in the figures and should be subtracted to give the actual net return to growers.

It was suggested that I, as secretary, write and ask if you would be kind enough to resolve this matter for us. Our interest is quite natural, because if these prices are really net, they are almost double what we have received.

Oyama, B. C., Canada A. W. Gray

Prices can be misleading as reader Gray points out. The prices he is referring to are season-average prices as published by the USDA and include packing and container costs as well as production costs, but do not include cost of transportation.—Ed.

"Adventures in Processing"

Dear Editor:

The article "Adventures in Processing" in the September issue hits the nail on the head. With a little imagination and hard work there is no limit to the new markets growers can open up. Let's have more stories like this.

Yakima, Wash. W. C.

"KYS-PAK APPLES SELL 10 CASES TO ONE"

That's what one dealer said about KYS-PAK. Others all over the country report wonderful results too. Here are some quotes from cards mailed to us... names and addresses on request.

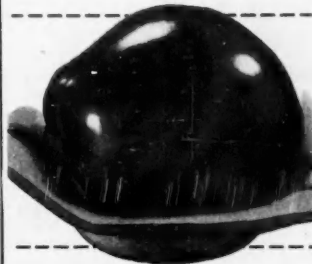
"All apples should be packed this way."

"Before—sold 50 cases per week. KYS-PAK increased it to 75. Don't lose an apple."

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"KYS-PAK apples are the best I've ever handled. The fruit is not bruised when received."

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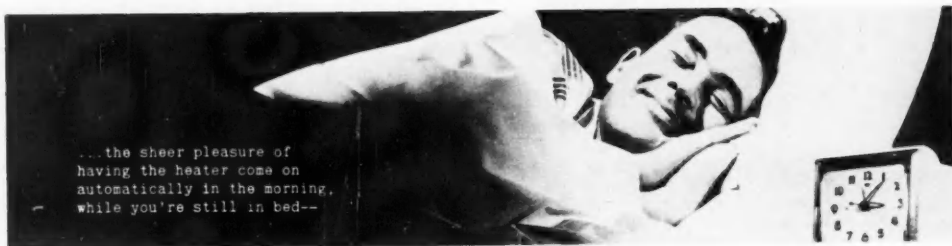


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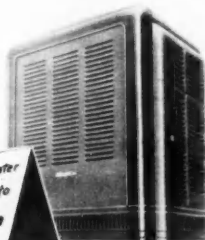
"MIDGET" PILOT—a true pilot, a tiny flame, a real fuel saver; burns over 40 hours on one gallon of oil; only Perfection has it!

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THE LONG RANGE FRUIT OUTLOOK

ARE YOU ADAPTING YOUR FRUIT ENTERPRISE TO CHANGING CONDITIONS? HERE ARE SIX SIGNIFICANT TRENDS TO STUDY FOR IMPORTANT LONG-RANGE PLANNING.

By H. B. TUKEY, Michigan State College

MANY fruit growers are so completely occupied with "making a go of it" that they scarcely can find time to fit their individual problems into the over-all picture. Accordingly, this story is an attempt to keep far enough away from the trees to see the forest, and to present in general terms six important trends in production, consumption, and utilization of fruits.

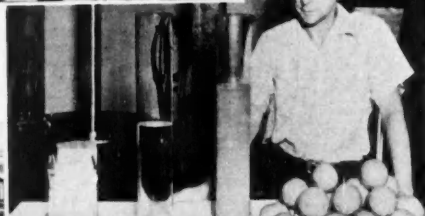
First of all, Mr. America consumes about 12 per cent more food than he did 40 years ago, but not all products have shared equally in this increase. Dairy products, for example, have gained nearly twice as much as the general average (24 per cent); meats, poultry, and fish have about held their own; eggs have increased about a third; fresh vegetables have increased a full third; and fresh fruits have



Mr. America likes and thrives on fruit.

The American diet now includes more protective fruits.

A high economic level means more fruits are consumed.



Processing is increasing in importance.

increased about 14 per cent—from 212 pounds per capita to 242.

At the same time potatoes have dropped nearly a half, and the cereals have fallen off more than a third. In other words, *folks still like fruit and use it*, though production is a little on the surplus side—as any grower knows who looks at the prices he receives for his fruit.

The second significant fact is that people buy more food if they have the money to do so, and these foods are of special kinds. For example, people in the low-income bracket (under \$500 annually) purchase only a little more than half as many pounds as those in



Varieties of fruits are standardized.

the higher-income brackets (over \$5,000 annually).

Further, those in the low-income bracket purchase more potatoes, beans, and cereals; whereas the high-income folks select more dairy products, meat, fruits, and vegetables. This is a good



A great assortment is now available for Mrs. Housewife.

reason for fruit growers to be especially interested in the general economic level of the country and in a high purchasing ability for Mrs. Housewife.

A third important point is that the diet of the nation is shifting slightly towards plant products and moving decidedly away from high energy foods towards the so-called "protective" foods. Thus, the per capita (Continued on page 22)

THE VIRUS PROBLEM IN NURSERY STOCK

By L. C. COCHRAN, U. S. Department of Agriculture

FRUIT GROWERS are rapidly learning to recognize virus and virus-like diseases in their trees and are rightfully demanding to know how many of these troubles are traceable to affected nursery stock. Symptoms of these diseases are commonly present on trees during some portion of the growing season but generally do not show on dormant trees or nursery stock. Growers, then, must depend on their nurseryman to furnish them disease-free as well as true-to-variety nursery stock.

Nurserymen, on the other hand, are faced with the problem of where to obtain and how to maintain disease-free stocks from which to propagate their nursery trees. The problem has become increasingly more difficult during the last 20 years with the discovery and recognition of a comparatively large number of new diseases, some of which are causing large losses and others of which are potentially threatening.

Virus diseases affecting stone fruits may generally be divided into three classes, as regards their possible occurrence in nursery stock. Diseases in the first group rarely occur in nursery stock because growth from diseased buds is depressed to the extent that trees grown from them do not reach merchantable size. Those of the second group are also rare in nursery stock, either because the disease is sufficiently well known that a discerning nurseryman would not choose affected trees for bud sources or the disease is sufficiently under regulatory control that the nurseryman is given prescribed procedures for avoiding it.

Diseases of the third group are more apt to occur in nursery stock for the following reasons: They do not generally reduce nursery tree growth sufficiently to prevent production of a merchantable-sized tree; a few are seed-borne, hence the disease may get into nursery trees through rootstocks; some have a rapid rate of orchard spread and may spread directly into the growing nursery stock if it is not sufficiently isolated; some diseases have not been well enough studied to determine their symptomatology; some diseases express symptoms on certain varieties but may be carried unwittingly in other symptomless varieties; and nurserymen have not appreciated the necessity of procedures for determining the presence of virus diseases in their budwood sources. (A chart of some of the more serious virus diseases which may be considered in the third group appears on page 19.)

No nursery improvement program can logically be undertaken without excluding certain bud-perpetuated nontransmissible disorders. These disorders are directly traceable to propagation from affected mother trees. Some are very common in nursery stock and result in serious losses due to reduction in yield. Common disorders of this class are listed on facing page.

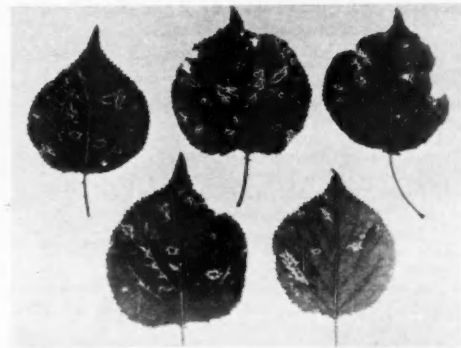
It has been common practice among nurserymen to obtain budwood direct from fruiting orchard trees. If such source trees are examined in the proper season, this procedure provides an opportunity to ascertain truthness to variety and avoid diseases which produce visible symptoms. The practice has been discouraged because of failure to observe the trees in the right season



SWEET CHERRY NECROTIC RUSTY MOTTE. Ring leaves showing necrotic lesions which begin to develop around June 1. Lambert is most seriously affected. Virus is spread by sucker shoots from symptomless Morello trees used for rootstocks.



ITALIAN PRUNE SPARSE LEAF. Normal Italian Prune leaf at right with three leaves at left showing off-shape and mottled pattern characteristic of this nontransmissible virus-like disease. Buds from affected trees produce affected nursery stock.



APRICOT RING POX. Leaves of Tilton apricot showing angular mottling. Similar areas develop in flesh of affected fruits. Nursery stock from such trees grows almost normally, produces worthless fruit, serves as reservoir from which virus can spread.

AMERICAN FRUIT GROWER



SOUR CHERRY YELLOWS. Normal leaf at left and three leaves at right showing typical yellowing. Some leaves on affected trees turn yellow three to six weeks after petal fall, drop from tree. Affected trees provide reservoir for spread of disease.



ALMOND BUD FAILURE. Three-year-old Jordanola almond trees showing bunched growth of bud failure-affected trees as contrasted to normal. Buds on affected trees perpetuate this nontransmissible virus-like trouble. Affected trees set few fruits.

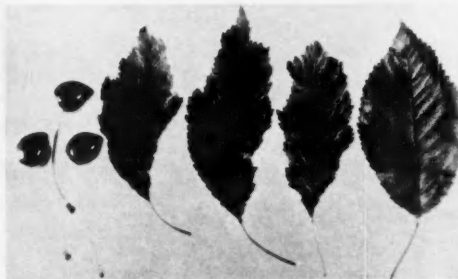
BUD-PERPETUATED NONTRANSMISSIBLE VIRUS-LIKE DISEASES

Disease	Host Affected	Effect
CRINKLE LEAF	Several varieties of sweet cherry, especially Bing.	Unfruitful
DEEP SUTURE	Several varieties of sweet cherry, especially Bing.	Unfruitful or fruit bears suture creases.
ALMOND BUD FAILURE	Several varieties of almond, especially Nonpareil, Peerless, and Jordanola.	Dieback and unfruitful
PRUNE LEAF SPOT	Serious on Italian Prune. Seen to lesser extent on other domestica type plums.	Loss of leaves causes poor quality and maturity.
ITALIAN PRUNE SPARSE LEAF	Seen principally on Italian Prune. Leaf symptoms resemble those of cherry crinkle leaf.	Unfruitful.

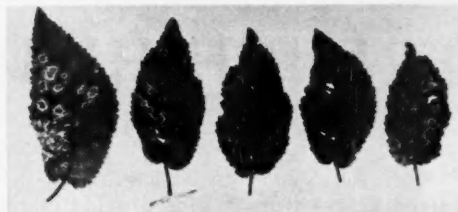
for virus disease expression, because lack of familiarity on the part of the nurserymen has caused certain diseases to be overlooked, and it does not provide any means of detecting the presence of latent viruses. Some nurserymen depend entirely on tree appearance at bud cutting time or on general orchard performance. Such indiscriminate collection of propagation material is sure to include undesirable material, especially in cherries.

To establish freedom from virus infection or virus-like bud-perpetuated disorders in trees requires careful observations, both on the parent tree and growing progeny, and for certain diseases requires indexing procedure. (This is accomplished by placing buds from the tree in ques-

(Continued on page 19)



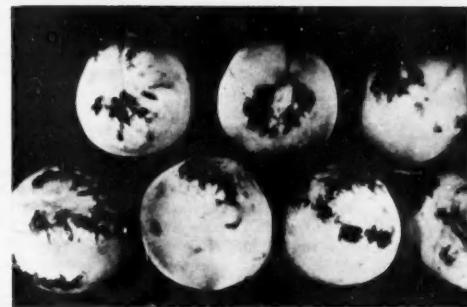
SWEET CHERRY CRINKLE LEAF. Normal leaf at right and three leaves and fruits of diseased Tartarian at left. The disorder is widespread in western U. S. on Bing and Tartarian; could be avoided by using budwood from progeny-tested trees.



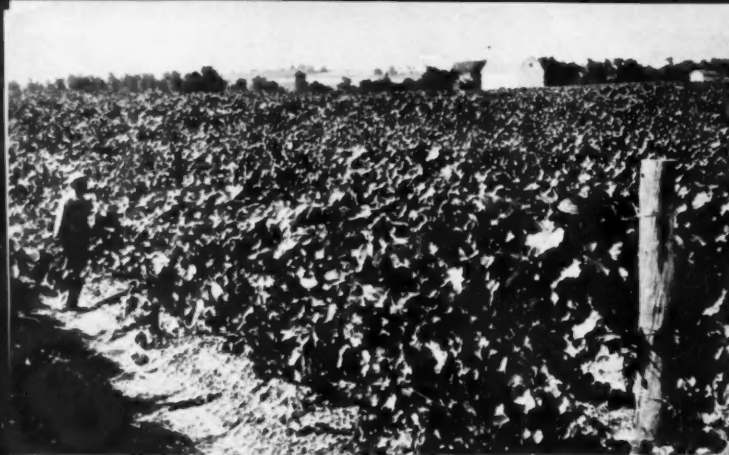
RING SPOT. Leaves of Mazzard cherry seedling showing chlorotic rings. The disease passes through mahaleb and Mazzard cherry seeds, occasionally peach seeds. Symptoms develop first year of infection; thus virus is latent in most stone fruits.



ITALIAN PRUNE LEAF SPOT. Normal Italian Prune leaf at right and three leaves at left showing typical injury. Leaf spots appear in older leaves in early summer; severely affected trees lose most of their leaves and fruit will not mature.



PEACH WART. Fruits of the Candoka peach variety showing the hard, horny excrescences around the stylar end caused by peach wart virus. Warts on fruits are the only symptoms of this disease. Buds taken from such trees all carry the wart virus.



FRENCH HYBRID GRAPES

Introductions from France provide many new and interesting varieties for processing and dessert use

By **RICHARD WELLINGTON**

New York State Agricultural Experiment Station

THE FRENCH hybrid grapes have been and are being produced in large numbers by French hybridizers. They are really Franco-American for they are obtained by crossing their French kinds with American varieties and species that contain no foxy aroma, such as is possessed by varieties like Concord and Niagara—a characteristic which is derived from the *Vitis labrusca* species.

Although little known in America they are by no means new. About 75 years ago the French discovered that the two best ways to preserve their vineyards from the ravages of the American grape-root louse, *Phylloxera*, was either to graft their vines onto American roots or to cross their varieties with American varieties and obtain "direct producers"—vines that produce satisfactory grapes and yet survive when not grafted.

The development of the rootstocks is another story but nevertheless an important one. These stocks must be easily propagated, fully compatible with their varieties, and adapted to their various soil types. Like the French hybrids they are given numbers such as Couderc 1202, Couderc 3309, 41-B, 420-A, 101-14, and Teleki 5 BB. Today they are found wherever the European grape is propagated. Even the yield of our Ameri-



The vigorousness and fruitfulness of the French hybrids are illustrated in these three views. At top, left, a block of three-year-old Baco 1 in a New York vineyard; at top, right, a two-year-old Seyve Villard 18-402; above, two-year-old Seibel 1000.

can kinds has been improved when grafted on some of these vigorous stocks. In central New York where soil was badly eroded and the Delaware variety grew with difficulty, these vigorous stocks ran all over the trellises.

It is now 40 years since the New York State Agricultural Experiment Station obtained four French hybrids from the USDA. They have all survived but are now surpassed by later introductions.

Like all seedlings, the French hy-

brids vary in vine and fruit characters. Generally speaking, they are vigorous, hardy, productive, resistant to diseases, and precocious, while their fruit varies in color, size and shape of cluster, size and shape of berry, flesh characteristics, flavor, quality, and time of ripening. Their sugar content is similar to our American grapes but their acidity averages higher.

Their precociousness is noted in the nursery for vines held a second year are often laden with fruit. Prob-

ably one of the problems in growing the French hybrids is to learn how to regulate their crop. At the Horticultural Station, Vineland, Canada, where they are testing 150 vines each of 35 varieties, they have found that allowing the vines to overproduce may result in the death of certain hybrids. Even leaving the fruit on the vines a few weeks after harvesttime had a deleterious effect on the vines.

The removal of excess clusters at blooming time seemed to be the best answer, as heavy pruning did not cut down the crop sufficiently. In one case as many as 90 clusters were removed and still the vine bore a good crop. Certain hybrids, such as Seibel 1000, are very hardy, having withstood -35° F. in North Dakota. In New York, when the temperature dropped to -31° F. during the winter of 1933-34, no injury was recorded.



A closeup of a three-year-old Baco 1 vine in New York.

Names have been given to a few of the French hybrids but usually they are distinguished by a number attached to the hybridizer's name. For instance, Seibel and his nephews, who have introduced about 500 different kinds, have used numbers running from Seibel 1 to Seibel 15062. Obviously, many of these hybrids, especially the late-maturing ones, will have little or no value in eastern America, and many of the earliest productions have less merit than the later introductions. Our problem is to determine the kinds that will thrive under our soils and climatic conditions and that have merit for processing or dessert. A large number have been brought in by the Division of Plant Exploration and Introduction, Beltsville, Md., and the New York State Agricultural Experiment Station, Geneva, N. Y.

OCTOBER, 1951



Grape clusters:
At top—Seibel 4986,
a white variety.
Right—Baco 1, a pro-
ductive red hybrid.
Extreme right—Seibel
1000, a hardy red.

Many of the French hybrids are now available for testing. Nurserymen especially interested in these new introductions are Boordy Vineyard Nursery, Riderwood, Md.; Schroeder Nursery, Hutchinson, Kans.; and Steuk Nursery, Sandusky, Ohio. Several other nurserymen are now propagating a few of the better known kinds.

Wine tests of a number of these hybrids are made each season by a few of the eastern wineries and other interested parties and in these tests

are included new seedlings from New York and other sources. It should be stated that although the hybrids make a good wine they are not superior to our own introductions and to our standard varieties.

As the French hybrids, like the European or California grapes, do not possess a foxy aroma like the Concord, they are not desired by the

Photographs of three
grape clusters by Rob-
ert A. Wesselsmann.

unfermented grape juice processors. On the other hand, they make a delightful non-cloying juice that is very pleasing to many tastes. The color of the juice may be varied from white to a very deep red depending upon the varieties.

(Continued on page 18)

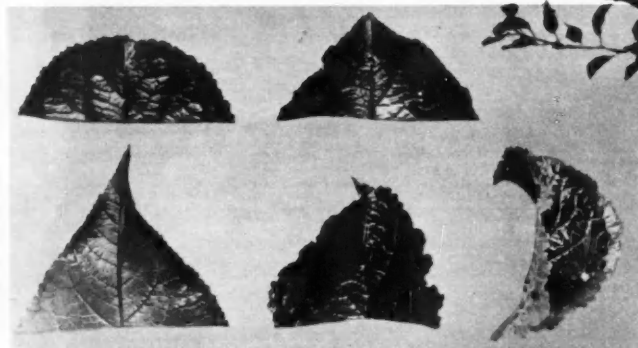
OVERCOMING THE PROBLEM OF MISNAMED NURSERY STOCK

By A. P. FRENCH
University of Massachusetts

PRACTICALLY everyone who grows, handles, or eats apples knows the difference between the fruits of such varieties as McIntosh and Baldwin or Stayman and Delicious. In a similar manner as fruit growers, market men, and consumers learn to distinguish between the fruits of different varieties, so it is possible for persons working with nursery trees to tell the varieties of most deciduous fruits apart.

Many nurserymen, particularly

Did you ever plant a McIntosh and get a Wolf River? Nothing can be more exasperating and costly. Here is how the Trueness-to-Name Inspection Service is helping to overcome mistakes in apple, cherry, pear, and plum nursery stock.—Ed.



Fruit varieties differ in various ways, including leaf characteristics. Above are leaf tips of plum varieties. Top, left to right—Monsieur and Yellow Gage; bottom—Monsieur, Lombard, and Pearl.

those of the older generation, had considerable ability along this line. Yet for one reason or another mixtures of varieties were very common 30 to 40 years ago, as evidenced by the number of misnamed trees found in commercial orchards of that age.

As a result of the sizable lots of misnamed trees, particularly Wolf River in place of McIntosh, which were found in young Massachusetts orchards during that period, Dr. J. K. Shaw, then research professor at the Massachusetts Agricultural Experiment Station, recognized that something should be done to correct this situation. Consequently, he began a serious study on the leaf characters of apple varieties.

In 1921, with the encouragement of the director of the experiment station and the backing of the Massa-

Variation in number, position, and type of gland on leaf petiole or stalk occurs in sweet cherries. Varieties above are, left to right: Seneca, Gov. Wood, Schmidt, Napoleon, Yellow Spanish, Victor, and Gold.

chusetts Fruit Growers' Association, Dr. Shaw made application of his knowledge by examining two-year-old trees of several apple varieties for trueness to name in a small near-



Habit of growth identifies some apple trees. Shown above is a Jonathan tree; on the facing page, a Delicious tree.

by commercial nursery. Other nurserymen soon learned of the plan and in the next few years the program was extended to include nurseries in Connecticut and western New York.

AMERICAN FRUIT GROWER

The original plan involved the attachment of a lead seal, on which was stamped the name of the variety, to a branch on each two-year tree. It was expected that this lead seal would remain on the tree until it came into bearing, thereby giving maximum protection against misnamed trees getting into the fruit grower's orchard. For several reasons, including the time and cost involved as well as injury to the trees in some cases, the plan of attaching an identification to each tree in the nursery was abandoned after a few years.

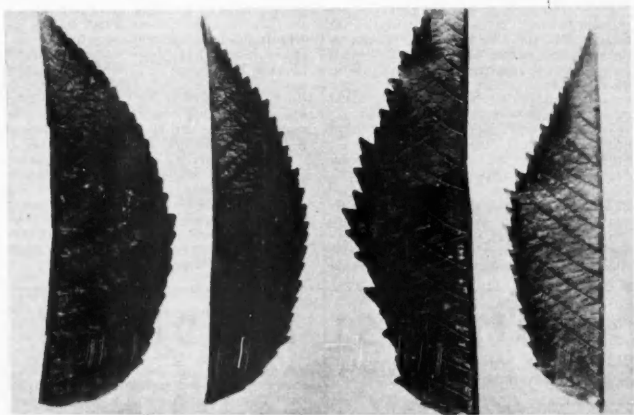
In its place a program of examining all one-year whips as well as two-year trees growing in a nursery was instituted. This procedure has

fruit as the particular nurseryman desires to have inspected. Such misnamed trees as are found are usually destroyed. However, if the number of misnamed trees in a particular row is large and it is possible to identify them, they may be marked in such manner that the nurseryman can separate them at digging time.

A report of our findings is, of course, given to the nurseryman for his guidance. A Statement of Inspection covering the ages and kinds of stock which have been examined for a particular nursery is issued. Some nurserymen make use of this Statement in their advertising.

Since this inspection service covers only apple, pear, plum, and cherry varieties, no nurseryman can

The characteristics by which apple and pear varieties are distinguished include such things as: leaf size, shape, color, surface texture, margin, and pose; lenticel size, number, and position; bark color, and in the case of two-year trees, habit of growth. In the case of stone fruits,



Leaf serrations, another distinguishing characteristic of sweet cherry varieties, identify the above as, left to right: Giant, Napoleon, Gov. Wood, and Gold.

made it possible to vastly increase the number of nurseries that can be served. It also has given the nurseryman maximum protection against the continuation of existing mixtures because mixtures in one-year trees are eliminated before wood is cut from those trees for propagation.

Since the time of Dr. Shaw's original study on apple varieties, several of his colleagues in the pomology department have made extensive studies on the plant characters of varieties of cherry, pear, plum, and cultivated blueberry. Some work has also been done on red raspberry and peach varieties. However, the peach work is still a long way from being ready for publication, because of the greater similarity between the nursery trees of many peach varieties than between those of apple, pear, plum, or cherry varieties.

The procedure of inspection for truthness-to-name is to make a row by row examination of all salable stock of all varieties for such kinds of

honestly claim that all of his fruit trees have been inspected for truthness-to-name. Quince and apricot varieties have never been examined for any nursery, while such examination as has been done on peaches gives only tentative identification.

In the case of apple, pear, plum, and cherry varieties it has been possible so far to positively distinguish between any two varieties which are known to be of seedling origin. However, in most cases color strains and other bud sport types have trees which are indistinguishable from the parent variety.

Thus, while McIntosh, Cortland, and Early McIntosh trees have many similarities, each variety has its own distinctive characteristics. The same is true of Delicious, Sweet Delicious, and Orleans, or Stayman, Turley, and Black Twig. On the other hand, trees of McIntosh and Roger's McIntosh, Stayman and Staymared, or Delicious and Richared are identical as they grow in the nursery.



Growth habit of Delicious (top) differs from that of Jonathan (facing page).

Lenticels or breathing pores differ in number, size, and position in pear bark, as shown in above varieties, left to right: Bosc, Flemish Beauty, Bartlett, Garber.

gland type, number and position, as well as color of the growing shoot-tip, and nature of the pubescence on the leaf petiole are also valuable characteristics for identification.

(Continued on page 20)



- Grape Picking Rates in West Highest in Quarter Century
- Over Million Citrus Trees Planted in Florida Last Year

CALIFORNIA—There is quite a bit of debate in this state about the grape crop. A huge crop of 3,062,000 tons was originally predicted but recent second guesses knock about 100,000 tons off the original estimate. Bulk of the crop is Thompson Seedless which can go into wine, raisins, or shipping channels. These three-way grapes are one reason the prices for the three outlets have to be somewhere near equitable or one of the channels may be flooded and the other slighted if one outlet is price-attractive.

Fresh shipped Thompsons to the bigger spot markets are averaging a third more in volume than last year with the price at \$2.60 a package—about 13 cents less than last year at this time.

Big question is the winery outlet. Just before harvest some of the main wineries cut the retail price of wine rather drastically. They are offering \$35 a ton and growers are resisting the price.

Last one into the market will be the raisin buyers. Bright spot here is the government offer to subsidize export shipments of dried prunes and raisins with payments up to 35 per cent of the gross sales price, f.a.s. U.S. ports. A wine price of \$35 is equivalent to about \$175 a ton for raisins figuring a five to one dry away and grape growers think that is much too low a figure for raisins.

California grape growers are paying picking rates 11 per cent higher than last year and the highest rate in 25 years. Over 3,000 growers in the San Joaquin Valley agreed on a base rate of five cents a tray for Thompsons and six cents for Muscats.

An innovation in the peach market this year was the unexpected rush the canners made on the freestone crop. For the first time they canned Early Elbertas, paying up to \$75 a ton for them. The freestone crop is estimated at 259,000 tons or 6,000 tons above last year. In 1950, 7,075 tons of peaches were dried and this year the guess is somewhere around 10,000 tons. —Jack Pickett.

ILLINOIS—Alvin O. Eckert, prominent fruit grower of southern Illinois, died recently at his farm home near Belleville. Mr. Eckert was the founder of Eckert's Roadside Market, through which he sold apples and peaches grown on his 500-acre Turkey Hill farm. He was a past president of the Illinois State Horticultural Society and of the Illinois Fruit Growers Exchange. He also was a former director and vice-president of the Illinois Agricultural Association.

FLORIDA—Now that this state has marketed its 100-million-box crop (1950-51 season), it can expect a big crop every year—in fact, it can expect with normal weather conditions an even bigger crop each year. The growers haven't quit plant-

ing trees. More than one and one-half million citrus trees were transplanted from nurseries to Florida groves during 1950. This was the largest number of trees planted in the last 22 years.

It is estimated there are 34,000 acres of non-bearing trees in Florida. That means that for the next four years, if there is no major disaster, there will be added to the bearing acreage of Florida citrus an average of 13,000 acres per year, and by 1954 Florida bearing total citrus acreage will be 490,000 acres.

Today there are more than 27½ million producing citrus trees in commercial groves of Florida.—Fred S. Johnston, Florida Citrus Exchange.

INDIANA—Some 500 Hoosier fruit growers gathered at the Johnson Orchards, Mooresville, for the summer meeting of the Indiana Horticultural Society. Phil Johnson, operator of the orchards, is

also president of the Indiana Horticultural Society.

Johnson's cultural practices are of special note, particularly in young orchards. Several blocks of old trees have been removed with the bulldozer during the past few years and reset to apples. Results of setting new trees in old orchard blocks have been quite successful because care is given to building organic matter into the soil. Johnson considers the first 10 years in the life of an orchard the soil-building years. During these he works into the soil as much vegetation as he can possibly grow in the orchard.

Several different types of cover crops are on trial, including Landino clover, Birdsfoot trefoil, sweet clover, alfalfa, perennial lespedeza, brome grass, sudan grass, and various combinations of these. Landino clover has proved one of the best orchard covers for this Indiana apple

(Continued on page 16)

FRUIT PEST HANDBOOK

(SEVENTH OF A SERIES)

JAPANESE BEETLE

THE Japanese beetle is an introduced insect that is widely distributed in the states along the Atlantic Seaboard from Massachusetts to South Carolina and occurs at scattered points in adjoining states and through much of the Midwest to the Mississippi River and St. Louis, Mo. Both the adult and developing grubs cause serious injury.

The adult is a shiny metallic green beetle a little less than half an inch long with coppery-brown wings and a series of small patches of white hairs along each side and back of the body just under the edges of the wings. It is active only in the daytime and in sunny situations. It is extremely destructive to the leaves, blossoms, and fruits of a large number of

(Continued on facing page)



Adult beetle.



Left—Japanese beetle grub. Right—Beetles feeding on apple leaves.

Photographs courtesy USDA.

plants, shrubs, and trees, making lacework of the leaves and consuming much or all of the eatable portion of ripening fruits. Badly injured leaves dry up and fall off.

The grub stage of the Japanese beetle is white, about an inch long when full grown, and similar to our native kinds of white grubs. In the grub stage the insect feeds in the ground on the roots of various plants, particularly grasses, and often causes serious damage to turf in lawns, parks, and golf courses.

The Japanese beetle spends about 10 months in the grub stage in the soil. The adult beetles appear about the middle of June in the latitude of Philadelphia, slightly earlier to the south, and later to the north. They are most abundant during late June, July, and August. Periodically the females stop feeding and go into the ground, usually in grassy areas, to lay eggs, which hatch into small grubs.

Control.—The foliage of fruit and shade trees, shrubs, and other plants can be protected from beetle attack with the following insecticides in 100 gallons of water applied when the beetles first appear and later as needed:

1) DDT (50 per cent wettable powder), two pounds. For fruit and shade trees, shrubs, corn (unless the stalks are to be used for fodder), and flowering plants.

2) Methoxychlor (50 per cent wettable powder), two pounds. For fruit and shade trees, shrubs, vegetables, corn, and flowering plants.

3) Lead arsenate, six pounds; plus wheat flour, four pounds; or light pressed fish oil, one and one-half pints. For shade trees, shrubs, and flowering plants.

4) Powdered derris (four per cent rotenone), three pounds. For fruit trees, grapes, small fruits when fruit is about to ripen, vegetables, and flowering plants.

Where spray equipment is not available, apply a five per cent DDT or methoxychlor dust or hydrated dusting time when the beetles first appear and at intervals as needed thereafter. Dusts will need to be applied more frequently than sprays.

Do not use DDT or lead arsenate on the edible portion of vegetables or closer than three or four weeks to harvest of fruit; in such situations use rotenone, or lime. Methoxychlor should not be applied to fruits about to ripen or to the edible portion of vegetables about to be harvested.

Turf areas may be protected from injury by Japanese beetle grubs for at least six years with DDT, 25 pounds per acre, or for at least three years with chlordane, 10 pounds per acre. To apply as a dust mix six pounds of 10 per cent DDT or two and one-fourth pounds of 10 per cent chlordane with several times their volume of slightly moist sand, soil, or other suitable material per 1,000 square feet to be treated and apply to the turf evenly with a fertilizer distributor or by hand. To apply as a spray dilute one and one-fourth pounds of 50 per cent DDT wettable powder or one-half pound of 50 per cent chlordane wettable powder in 25 gallons of water and apply evenly to each 1,000 square feet to be treated. Wash both the dust and spray into the turf with water.

Milky disease spore dust applied as recommended on the package will control Japanese beetle grubs in turf indefinitely and can be used instead of an insecticide if immediate results are not required. Milky disease works slowly and full benefit may not be evident for several years.—Howard Baker, USDA.

OCTOBER, 1951

WASHINGTON FRUIT LETTER

- Expect increasing manpower shortages
- New residue tolerances will be announced after Thanksgiving

By LARSTON D. FARRAR

Washington Correspondent, American Fruit Grower

A GENERAL war is closer than most folks think. The average American psychologically isn't ready for war, but Federal Civil Defense Administration, the White House, and the Departments of State and Defense are trying to make John Q. Public see the light. It's part of a pattern.

The military men are not unprepared mentally. They expect the war in Korea to become broader, more general, and other pressure points to explode soon. Don't ever discount a general war—at any time!

MANPOWER difficulties, already apparent, are to become more marked. Youths who normally would be coming into the labor force just aren't available any more. There aren't as many youngsters, for one thing, due to the depression-engendered slump in births 16 and 18 years ago. More students are going on to high school and college than formerly. The draft is picking up speed again, and burgeoning war industries are beckoning with high pay and time and a half for overtime.

This problem can be licked only by mechanization, advance planning, and exercise of the greatest possible ingenuity.

GETTING building materials of all kinds is becoming increasingly difficult, due both to the developing shortages in aluminum, copper, and steel, but Defense Order No. 5 establishing procedure for construction of agricultural and related projects, should make things somewhat easier on large jobs.

Full details should be obtained from the Production and Marketing Administration office nearest you, or by writing to the Office of Materials and Facilities, Production and Marketing Administration, USDA, Washington 25, D.C.

RESIDUE tolerances for fruits and vegetables will not be issued before Thanksgiving, or perhaps later, according to Lea S. Hitchner, executive secretary of the National Agricultural Chemicals Association.

Mr. Hitchner said that he learned from C. W. Crawford, Commissioner

of the Food and Drug Administration, Federal Security Agency, that it likely will be "a few months" before the General Counsel's office has completed studying the record of the hearings.

NATIONAL Agricultural Chemicals Association, reporting that the peak-use period for some pesticides has passed, thus easing the supply to some extent, has released the following thumbnail sketch of the present and contemplated supplies of various insecticides:

DDT. Will remain tight.
DDD (TDE). Will remain short.
BHC. Adequate to tight.
Toxaphene. Short.
Chlordane. Tight.
Aldrin. Will become tighter.
Dieldrin. Will remain short.
Lead. Adequate.
Calcium. Adequate.
Cryolite. Ample.
Parathion. Adequate.
TEPP. Ample.
Pyrethrum. Short.
Copper Sulfate. Tight but easing.
Fixed coppers. Adequate.
Dinitros. Will remain tight.
Carbamates. Ample.
2,4-D and 2,4,5-T. Short.

APPLE industry leaders are cheered considerably to learn that the USDA intends to purchase fresh apples in important commercial areas for distribution to school lunch programs.

"Purchases under this program will be confined essentially to fresh apples of recognized leading commercial varieties, of preferred grades, of two and one-half inch or larger sizes, and meeting the condition requirements of the U. S. Standards for Export," USDA announced.

THE announcement by the British Ministry of Food, which since the close of World War II has made all purchases of apples on this continent for consumption in the United Kingdom, that 1951-52 season imports will be through regular commercial trade channels and on the basis of specific licenses for limited quantities, may presage good news for the deciduous fruit industry.

MOBILIZE FOR APPLE SALES

Meeting in Chicago with representatives of the nation's organized retailers the National Apple Institute made five recommendations to all growers for the profitable marketing of this season's apple crop:

1) Leave in the orchard every apple your crew can pass over that you can't actually figure to show a net return over expenses and risks.

2) Pack for the choosiest market apples have ever encountered.

3) Capture all the consumers you can with full offerings of seasonal varieties at attractive prices.

4) Time the movement to place each variety in the market in its own best season and each lot in its own best condition for consumer satisfaction.

5) Boost the sale of the crop with every resource—locally, regionally, and nationally.

Four special retail sales drives will be pushed by the retailers:

Sept. 20-Oct. 6—Apple Harvest Time

Oct. 25-Nov. 3—National Apple Week

Nov. 29-Dec. 8—Apples for Health Drive

Jan. 31-Feb. 9—Tentatively set, subject to later consideration.

For further information contact your regional or state apple organization or your state horticultural society.

STATE NEWS

(Continued from page 14)

grower. Birdsfoot trefoil, while slow to start, is showing up very well.

One of the best soil-building crops Johnson has found is a combination of soy beans and sudan grass. Seedlings are made in the early spring and the heavy growth is worked into the soil in late summer. No plowing is done, tillage being accomplished through the use of heavy discs and a deep tillage tool or field cultivator. The latter tool penetrates to a depth of 10 inches and helps in the aeration and drainage of the soils.

Visiting growers were interested in the way Virginia Crab and Hibernial rootstocks are used in the orchards. Greater success has been experienced with Virginia Crab than with Hibernial. Scaffold limbs are selected the second year from planting and buds inserted about eight inches from the trunk. Trees so budded have come into heavy bearing a little earlier than trees propagated on common nursery seedlings.—Eldon S. Banta.

GEORGIA—The trend in Georgia is for fruit growers to sell their products locally and at lower prices than they can get on distant markets. The high cost of shipping is a contributing factor to this situation. Growers find too that they make more money selling them locally.

Demand for peaches in 1952 will be greater than it was this year, which is usually the case following a good crop.—George H. Firor, Ext. Hort.

In tests of dwarf rootstocks at the Ohio Experiment Station it has been found that apple varieties budded on Malling stocks II, IV, and VII give the most promising results for commercial plantings. Vernon Patterson, extension horticulturist, suggests that growers try small plantings of dwarf trees.

HARVESTING OREGON GOOSEBERRIES

The Vogts and Steiners work together to pick twelve acres

PLENTY of fine gooseberries for pies were being harvested from the five-acre patch of Carl Vogt in Salem, Ore., when we visited his field last spring.

Vogt and his neighbor, John Steiner, were almost too busy to talk

year Mr. Steiner did the cleaning with his old machine which he has used for some time. It worked very efficiently, keeping both Mr. and Mrs. Steiner working at top speed dumping lugs of berries into it.

Mr. Vogt, however, has invented a very clever cleaning machine, mounted on wheels which can be taken into the field. Berries are poured into a hopper at one end, chaff blows out the other end, and the berries drop into a sack ready for market. The day we were at the gooseberry patch the Vogt machine was not quite completed. He will use this same cleaner for husking filberts this fall.

Mr. Vogt has been growing gooseberries for the past 15 years. He planted his first acreage during the depression, when most people were removing theirs due to price condi-



Picking gooseberries on Vogt's patch.

with us. The two men were working together to harvest 12 acres of gooseberries in record time. It keeps two men busy to keep up with the pickers, and part of Steiner's planting was yet to be harvested.

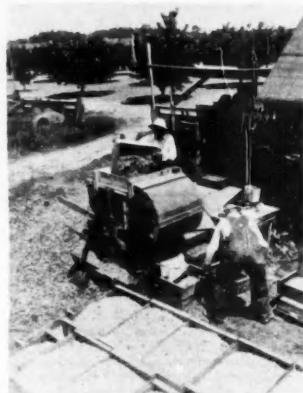
Members of the picking crew wear large canvas aprons, which they spread under the bush as they circle it in raking berries from the branches



An apronful of the Oregon Champion.

with glove-covered hands. The berries are poured from these aprons into boxes. Each picker puts his number on his box of fruit.

The boxes are then hauled by truck to the cleaning machine. This



The Steiners operate cleaning machine.

tions. Over the 15-year period Vogt says prices have been up and down from three and one-half cents to 10 cents after the war.

Yields have been on the average from three to four tons per acre. He sprays five times before picking, twice with lime sulfur and three times with Ferbam. After picking a Bordeaux mixture is used once.

No fertilizer has been used other than a vetch and oat cover crop disked in during the spring. All the berries are sold to the Blue Lake cannery to be processed in gallon cans for the bakeries.

Vogt has always made money with his gooseberries, and to back up that statement he pointed to a fine modern home. This house was built with gooseberry money, he boasted.—W. M. Gifford.

THE QUESTION BOX

Of the new organic sprays, which is best for controlling fire blight?—Ohio

Experience from Iowa where blight was very serious this year, showed that no spray material gave adequate control. A weak solution of Bordeaux reduced fire blight somewhat but caused considerable fruit russetting. Zineb (Parzate) gave widely varying results. In Missouri, Bordeaux gave better control than Naham (Dithane), although Naham does not russet the fruit.

I have a few peach trees which are full of borers (gum in lumps around the base of the trunk). Will you please advise what is the remedy?—New York

Small peach growers generally prefer the paradichlorobenzene method of fighting peach tree borer. Apply PDB crystals, which may be obtained from your orchard supply dealer, in a ring completely encircling the trunk, not closer than one inch nor at a greater distance than three inches. Cover with dirt to confine the gas. For trees under three years, apply one-half ounce of PDB per tree; trees three to six years, three-fourths ounce; and for older trees, from one to one and one-half ounces.

Do not make application in the summer as borers are not then in the tree, or in the late fall when the temperature is likely to be below 60° F. for the first two weeks after application. In the latitude of southern Georgia the best dates for making these applications will usually be between October 15 and 20; central Georgia, between October 10 and 15; in northern Georgia, between September 25 and October 5; southern New Jersey, October 1 and 10; northern New Jersey, September 20 and October 1; southern Illinois, September 25 and October 15; and northern Illinois, September 20 and October 20.

Is it necessary for me to use lime or gypsum in my orchard?—Washington

Neither lime nor gypsum is needed if your orchard is normal or if you have followed a moderate fertilizer program. Lime is recommended only for very acid orchard soils and should be applied only to soils with a pH less than five.

Gypsum does not affect soil structure or tilth in a normal orchard soil and is not recommended for Washington orchards.

I have a problem with the birds destroying the grapes when they are ripe. Last year they destroyed about 75 per cent of the crop. They light on the bunches and their claws rip open the grapes, sometimes destroying 90 per cent of the bunch.—Kansas

There are two commercial devices for frightening birds. One is an aluminum foil strip which the wind revolves. They are seen frequently as decoration at highway service stations and may be obtained from Dazian's Inc., 125 No. Wabash Ave., Chicago 2, Ill. Another device is the automatic exploder made by the Salt Lake Stamp Co., 43 W. Broadway, Salt Lake City 1, Utah.

A home remedy often recommended is to place a radio in the orchard. Evidently the birds will not tolerate radio programs, although neighbors may object, too. Still another way to frighten feathered marauders is by means of high pitched sounds. A radio engineer devised a high frequency signal, so high that it cannot be heard by the human ear. This so disturbed the birds that they left for quieter places.

OCTOBER, 1951

When autumn leaves fall left and right



It's time to look for green and white!



40¢ per U. S. Quart, including Federal Lubricating Oil Tax

THIS WINTER—use a really fine winter grade motor oil like Quaker State Cold Test. Notice how much you will reduce the rate of wear in your engines. And see how much you save, too! Repair and upkeep costs will be lower. And besides, you'll enjoy quicker starts, smoother, quieter and more powerful performance.

Only 100% pure Pennsylvania

grade crude oil is used in Quaker State Motor Oil. Only the finest, most modern equipment is utilized. Only top-flight technical skill is employed in its making. So no wonder Quaker State is the finest motor oil produced anywhere in the world.

If the manufacturer of your car recommends Heavy Duty Oil with detergency, ask for Quaker State HD Oil.

QUAKER STATE COLD-TEST MOTOR OIL

QUAKER STATE OIL REFINING CORPORATION, OIL CITY, PA.

Member Pennsylvania Grade Crude Oil Association



Control at the proper time is of extreme importance regardless of what the situation may be. Control of persistent fungus diseases on crops is of major importance to the grower. The first step in the right direction is to insist on a fungicide of proven merit.—insist on TC fungicide.



TRI-BASIC Copper Sulphate is a chemically stable copper fungicide containing not less than 53% metallic copper. TRI-BASIC Copper Sulphate can be used as a spray or dust on practically all truck crops and citrus crops. Control persistent fungus diseases—correct copper deficiencies from a nutritional standpoint. Use TC TRI-BASIC Copper Sulphate.



COP-O-ZINK is a new, neutral copper-zinc fungicide containing 42% copper and 11% zinc. COP-O-ZINK gives a superior performance in control of fungus diseases. COP-O-ZINK composition of two essential elements gives it added value in correcting deficiencies of zinc and copper and in stimulating plant growth. COP-O-ZINK is compatible with all inorganic and organic insecticides. No lime is required. For use in spraying or dusting.



NU-Z contains 55% metallic zinc. It is a neutral zinc compound which does not require the addition of lime for direct foliage application. NU-Z gives excellent coverage and adherence to plant foliage, thus rendering it available over a longer period of time. Safe for direct application. For zinc deficiency and plant nutrition—use as spray or dust.

DEMAND

That Tennessee Tri-Basic Copper Sulphate be used when buying Copper Sulphate mixtures.

Let us send you free literature on the above products. Send card to Tennessee Corporation, Grant Building, Atlanta, Georgia or Lakeland, Ohio.

TENNESSEE TC CORPORATION
Atlanta, Georgia Lakeland, Ohio

FRENCH HYBRID GRAPES

(Continued from page 11)

Reds with an intense color are Baco 1, Ravat 262, Bertille Seyve 2862, Seibel 6339. Some of the hybrids are too acid for table grapes, while others have a pleasing neutral flavor as Seibel 1000 and a delightful muscat aroma as Seyve-Villard 14287. Other noteworthy hybrids for table use are Seibel 9110, Seibel 13047, and Seibel 13053.

Time is required to determine the full merit of the French hybrids as well as the American seedlings. Unless they surpass in some important character the varieties that we now have there is no need of burdening the industry with more introductions. Interestingly, the wine tests in France have compared favorably with those in America.

In a brief article it is impossible to note all of the French hybrids now on trial. Only the early-ripening kinds or what the French call "First Period" and those that have rated good in the wine tests will be noted. Further tests are necessary before it can be stated which ones deserve trial on an extensive scale.

White Varieties

Ravat 6. A promising introduction. Vine vigorous and productive; clusters medium; berries roundish and small. May require one or two sprays.

Seibel 4986. Syn. Rayon d'Or. Vine is vigorous and productive. Clusters medium, winged, and compact; berries medium, oblate, and sweet. Requires short pruning.

Seibel 5279. Very early and productive. Clusters long and loose. Makes a good dessert, as well as being a wine grape. Requires long pruning.

Seibel 9110. Promising for table and wine. Vine medium in vigor and productiveness. Clusters above medium, rather loose; berries medium, ovate, crisp, and excellent in quality. Season late first period. Half-long pruning recommended.

Seyve-Villard 5-276. Vine vigorous, productive, and resistant to diseases; clusters large, moderately compact; berries medium and very sweet. Requires short pruning.

Seyve-Villard 14-287. Productive muscat type that produces large, rather compact clusters and below medium, roundish oblate berries. Desirable for wine and dessert. Subject to mildew. Half long pruning is recommended.

Red Varieties

As desirable red grapes for wine are less numerous in eastern America than varieties for white wines,

there is unusual interest in good red types. Black varieties as Seibel 1000, that have an uncolored juice, can be used for either white or colored wines.

Baco 1. Vine very vigorous and productive; clusters long and moderately compact; berries small. Requires long pruning. Extreme vigor indicates that it may prove valuable for planting in soils of low fertility.

Ravat 262. Highly recommended in France as a wine grape. Also shows promise in America. Vine vigorous and productive.

Landot 244. One of the more recent productions that offers promise as a desirable wine grape. Vine productive; clusters rather compact; berries medium and good in quality. Susceptible to mildew.

Seibel 1000. Has been tested more than any of the other French hybrids. Vine is hardy, moderately productive; clusters and berries medium. Latter are roundish, sweet, and neutral in flavor. May produce a few very small green berries. Slightly susceptible to mildew. Half-long pruning is recommended.

Seibel 5455. A vigorous and prolific hybrid that produces a desirable wine. Clusters long and compact, berries rather large. Wagner in Maryland has reported that it is subject to winter injury.

Seibel 7053. Very vigorous and very productive. Clusters are large. Requires short pruning and spraying for mildew. Rated highly in France.

Seibel 10878. Strong grower and productive. Bunches medium to large, compact; berries below medium. Last year winter killing was reported by one grower in Ontario, Canada. Probably let vines overbear. The variety is recommended as worthy of trial.

THE END

NEW BULLETINS

● **Picking Virginia Apples** (Circ. 529, 1951) Va. Polytechnic Institute, Blacksburg, Va.

● **A Graphic Method of Calculating Spray Mixes** (Misc. Pub. No. MP-23, 1951) Okla. Agri. Exp. Station, Stillwater, Okla.

● **Grading Apples in the Orchard** (Article 33-41, 1951) Reprinted from Mich. Agr. Exp. Station Quarterly Bull., Bull. Room, Mich. St. Coll., East Lansing.

GROUP THREE VIRUS DISEASES

Easily transmitted through nursery stock

Disease	Features conducive to infected nursery stock	Geographic Distribution
PEACH RED SUTURE	Eventually ruins all varieties of peaches but is hard to diagnose in the early stages.	Michigan and Maryland.
LITTLE PEACH	Eventually ruins all varieties of peaches but is hard to diagnose in the early stages.	Northeastern U. S. and adjoining area of Canada.
PEACH WART	Trees must be examined in fruiting condition since the only symptom is warts on the fruits.	Northwestern U. S.
CHEERY BUCK-SKIN and WESTERN X LITTLE CHERRY	These diseases belong to a group and are variously expressed in different areas. Buds from affected sweet cherry trees on mazzard rootstock would produce diseased nursery stock.	Western United States.
LITTLE CHERRY	The only symptom appears to be reduced fruit size. Potentially serious because of a very rapid rate of orchard spread. All buds from affected trees appear to carry the virus.	Kootenay Lake district of British Columbia.
CHERRY TWISTED LEAF	This disease ruins the Bing variety and is potentially serious because it can exist without symptoms in other varieties. Bing trees have been infected where a symptomless variety was grafted on for a pollinator.	Washington and British Columbia.
CHERRY RUSTY MOTTLE	There is evidence of nursery spread of mild forms of this disease.	Northwestern U. S. and adjoining areas of Canada.
CHERRY NECROTIC RUSTY MOTTLE	There appears to be variable expression of this disease in different areas due to different forms of the virus. Some varieties of sweet cherry are symptomless. Morello cherries, used as rootstock, propagated from suckers under diseased cherries, have been responsible for infected nursery stock.	Variouly expressed in different areas of western U. S. and possibly in adjoining areas of Canada.
CHERRY MOTTLE LEAF	There are several forms of the virus producing a gradient of symptoms even on nontolerant varieties. Furms producing severe symptoms on Bing produce only mild symptoms on Lambert.	Western U. S.
SOOR CHERRY YELLOWS	Leaf symptoms are expressed only on sour cherry for a two-week period three to six weeks after petal fall and only in areas where summer temperatures are low. The seriousness of this disease has accentuated efforts to clean up nursery stock.	Appears to be widely present in all the sour cherry growing areas of U. S. and Canada.
APRICOT RING FOX	This disease produces both leaf and fruit symptoms, but varies in expression on varieties. Royal can be a symptomless carrier.	Local areas in Western U. S.
PRUNE DIAMOND CANER	This disease affects only French Prune, but symptoms are limited to bark cankers, which may not develop until the tree is 6 to 10 years old.	California.

A sizable list of other less important virus diseases known to have been carried in nursery stock could be added.

THE VIRUS PROBLEM

(Continued from page 9)

tion onto varieties and species known to express symptoms of specific diseases.) Such special procedure is beyond the reach of the average nurseryman, thus, he must have assistance if he is to produce good stock. This assistance can be obtained by co-operation with regulatory and research agencies available in the various areas. The principal fruit growing states have made rapid strides in developing nursery improvement programs and in locating and furnishing disease-free foundation stock to their nurserymen.

Nurserymen are urged to establish and maintain their own budwood source mother blocks away from

commercial orchards. This can be done by obtaining virus-free foundation material or by establishing disease-free material from their stocks already in use. Production of disease-free trees from known disease-free sources is much easier and safer than from indiscriminate orchard sources which are exposed to natural spread.

Ownership of such mother blocks has several additional advantages: It allows the nurseryman close contact with his budwood source, progeny performance records can be taken, and trees can receive special handling for production of more suitable budwood.

THE END

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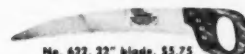
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*Specialty created to bring bigger,
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To grow best... to mature earliest your trees require a complete diet of food elements from the soil. That is why so many successful growers use special, new formula Vigoro for Commercial Growers. It assures better color and flavor, uniform maturity, more top-grade fruit per tree. Benefit from the experience of others, be sure you get—and use regularly—new Vigoro for commercial growers.

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MISNAMED NURSERY STOCK

(Continued from page 13)

For example, the Gov. Wood sweet cherry leaf petiole has large reddish glands while those of Yellow Spanish are small, light colored, and situated some distance down the petiole. The lenticels on the bark of Flemish Beauty pear trees are fewer and of different shape than those of Garber. Lambert and Napoleon sweet cherry trees are most easily distinguished by the difference in color of their growing shoot-tips. McIntosh and Cortland apple leaves differ especially in shape of the leaf base, while Delicious and Jonathan trees differ markedly in habit of growth.

Some of the serious mixtures which have been found quite frequently include the following: Wolf River apple trees mixed in or substituted for McIntosh; Stayman, Black Twig, and Winesap mixed together; Delicious and Winesap; Wealthy and Duchess; Rome Beauty and Northwestern Greening; Napoleon, Lambert, and Bing sweet cherries intermixed; Gov. Wood and Windsor; Yellow Spanish substituted for Napoleon; Early Richmond in Montmorency; Monarch and Imperial Gage plums intermixed; Italian Prune in Stanley; and a worthless unknown pear substituted for Bosc.

How Mixtures Occur

Mixtures may arise in several ways:

- 1) The person who cuts the propagating wood may get onto the wrong row.
- 2) Grafters and budders may fail to clean up and destroy propagating wood left over from one variety before starting to work on another variety.
- 3) Varieties may occasionally become mixed accidentally in storage.
- 4) And, unfortunately, there are still some unscrupulous nurserymen who write their labels to fit the orders at hand rather than to fit the supply of trees available.

However, the nurseryman cannot be blamed for all mixtures that are found in nursery trees. Many times we have found mixtures in trees propagated from bearing orchards. Sometimes the fruit grower is unaware of a mixture in his orchard, or not having an accurate map of his orchard sends the nurseryman to the wrong trees to cut buds.

Recently, 40,000 Northwestern Greening trees were found in one nursery labeled Red Rome. Inquiry revealed that the nurseryman had gone to a young bearing orchard to cut buds and by mistake had gotten

onto a row of Northwestern Greening which the fruit grower had failed to tell him was in that block of Red Rome.

In practically every case one or more mixtures of serious proportion have been found in a nursery the first year it is inspected. However, it is gratifying to find no mixtures whatever in several of the nurseries which have been inspected regularly over a period of years.

Extensive Inspection

The Trueness-to-Name Inspection Service, which is now sponsored jointly by the Massachusetts Fruit Growers' Association and the American Pomological Society, currently

HANDY ANDY



There's nothing handier than a Model A engine about a farm, according to fruit grower Roy Hulbert, Middlesex County, Massachusetts, who uses four remodeled Model A trucks and 11 Model A engines to help with the farm work. His Ford engines do everything from running dusters to fire fighting and loading spray tanks. Trips into town for a broken part are unnecessary as all parts are interchangeable. Hulbert buys the inexpensive rebuilt motors for about \$100 and converts them in his spare time in his workshop. Four of his converted jobs are one and one-half-ton Model A trucks with short wheelbases that he finds just the thing for maneuvering through the orchards with a full load.—Charles L. Stratton.

serves about 30 of the leading fruit nurseries in Massachusetts, Connecticut, New York, Pennsylvania, Delaware, Maryland, Virginia, Ohio, Michigan, and Iowa.

We aim to service all requests, but limited trained personnel necessitates careful planning. A list of the nurseries currently being served is available from the Department of Pomology, University of Massachusetts at Amherst.

THE END

AMERICAN FRUIT GROWER

NAMES IN THE NEWS

• The Wilder medal of the American Pomological Society, one of the highest awards in the field of horticulture, was recently presented to **L. J. Richardson**, Washington State grower who discovered the now widely grown Richard apple and who turned this red-blush bud sport of the Delicious over to the Columbia & Okanogan Nursery Company, Wenatchee, Wash., in 1926, two years after its discovery in his orchard at Monitor. The presentation was made for the APS by **F. L. Overlay**, horticulturist at the Tree Fruit Experiment Station, Wenatchee, during the 11th annual field day of the station.

• National Peach Council secretary-treasurer, **Dr. M. J. Dorsey** of Urbana, Ill., on tour in western peach producing areas, has observed a change toward planting of new earlier improved varieties—following the pattern set in eastern peach areas.

• Veteran grower **Fred Ulrich** of Rochester, Minn., is perhaps the country's most blue-ribboned fruit grower. His displays of apples, crabapples, and pears won 32 blue ribbons at the Minnesota State Fair and in addition, Ulrich received the sweepstakes cup for amassing the highest number of points in the fruit judging. . . For "Outstanding Example of Good Marketing" of fruits, the New York State Cherry Growers Association was one of the top honor winners at the Syracuse State Fair with its cherry exhibit featuring cherries pouring into a huge pie and displays of canned and frozen fruit, arranged under the direction of **Charles Howard** of Albion. The Western New York Apple Growers Association, of which **Steve Putnam**, Rochester, is secretary, received honorable mention for its display of processed apple products.

• This is a particularly noteworthy year for **Lester Collins** of Moorestown, dean of New Jersey fruit growers. As reported in April "Names" he was honored with a citation during the 11th anniversary of the N. J. Fruit Co-operative Association. At the recent annual meeting of the 170-year-old N. J. Agricultural Society he was not only re-elected president for his seventh term but was awarded a gold medallion in recognition of his service to the fruit industry. Mr. Collins is also president of the N. J. Blueberry Farmers Association, the Blueberry Co-operative Association, a marketing organization; and the N. J. Peach Council, which supervises the propagation and sale of new peach varieties.

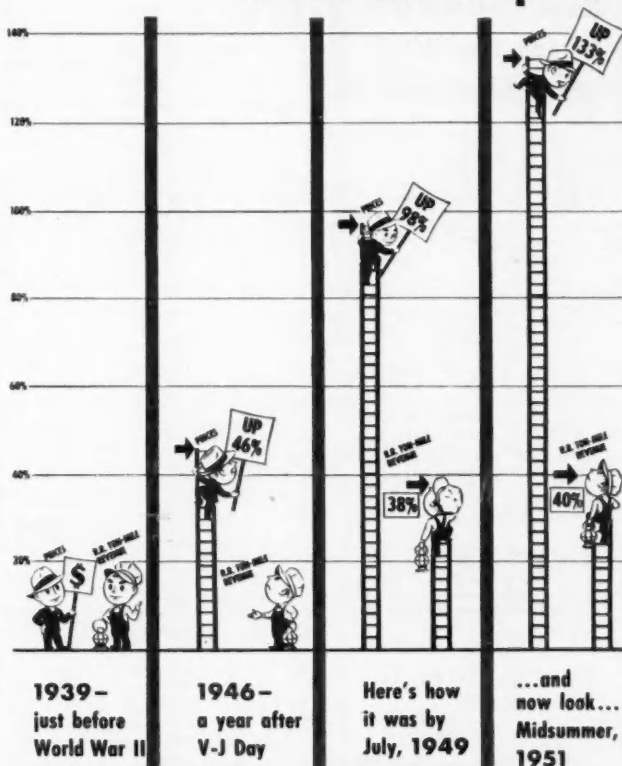
• Anxious to help solve any problem which may perplex Utah growers is genial **Gene Oberly**, new extension horticulturist from the Palisade area of Colorado. . . In the newly created position of extension specialist in fruit and vegetable marketing in the University of Illinois College of Agriculture, **William F. Lomaney** will work closely with chain stores, independent retailers, and other trade outlets in a program of retailer education in the handling and selling of fresh produce.

• The proceedings of the 44th annual convention of the Southeastern Pecan Growers Association was dedicated to **G. H. Blackmon**, Florida department of horticulture head. Research by Blackmon has been a large factor in the establishment of leguminous cover crops in pecan orchards and the improvement of cultural practices for pecans.

OCTOBER, 1951

Railroad Freight Charges ...

... the **SMALLEST PART** of the rise in prices



So it is— that Railroad Freight Charges have become a smaller and smaller part of commodity prices

Prices are as reported by the U. S. Department of Labor, Bureau of Labor Statistics.

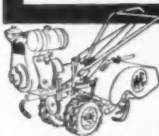
Ton-mile revenue, while not an exact measure of freight rates, measures what railroads get, on the average, for hauling a ton of freight one mile.

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LONG RANGE FRUIT OUTLOOK

(Continued from page 7)

daily consumption in terms of calories is about 3,200 compared with about 3,500 forty years ago. Carbohydrates, which mean largely cereals and potatoes, have dropped from 488 grams to about 400 per person.

On the other hand the calcium intake has jumped from .85 to 1.04 grams, vitamin A has increased from 7,600 units to 8,700, and ascorbic acid has moved from 105 milligrams to 123 milligrams. This is good news for both fruit and vegetable growers since nearly a third of the nation's ascorbic acid is supplied by citrus fruits, and a little over a third of the vitamin A comes from leafy, green, and yellow vegetables.

Processing—A Major Outlet

The fourth point is that Mr. America has begun to like and use processed fruits and vegetables—canned, dried, juiced, and frozen. The processing industry has been forging ahead at a speed that has not been properly recognized by all growers. Slightly more than half of ALL fruits are now processed, and for vegetables the figure is even higher.

Some idea of this tremendous increase is shown by the fact that Mr. America now selects 40 pounds of processed fruits a year where he bought only 3.7 pounds 40 years ago. Incidentally, one of the interesting changes has been the arrival of canned baby food, consumption of which is now 3.2 pounds for every man, woman, and child in America, or 46 pounds per child under three years of age.

Fruit juices have nearly doubled in 40 years to over eight pounds per person per year, including about two pounds of citrus concentrate. Frozen fruits have reached nearly three pounds per person compared with one-fifth pound 40 years ago, while dried fruits have barely held their own at about four pounds per person.

The moral of the story is that growers must pay more attention generally to processing as a major outlet, including selection of variety, uniformity of fruit, and quality tonnage.

Family of Fruits Increasing

The fifth point is that within the family of fruits there have been some big changes. Maybe it is due to all this talk about "democracy, the underprivileged, and a social conscience!" At all events the little fellows (the minor crops) have been gaining more than the self-styled leaders of a few years ago. This is shown by the number and kinds of commodities now offered Mrs. Housewife.

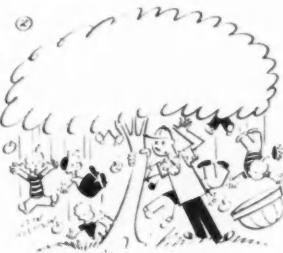
The list of fruits and vegetables sold in carload lots on the New York mar-

ket totals 98, some of them never heard of a generation ago, like escarole, mangoes, cranshaws, and dasheens. Besides such common items as apples, peaches, cherries, plums, pears, berries, bananas, oranges, lemons, and grapefruit, the market now offers limes, tangerines, kumquats, pineapples, figs, dates, avocados, prickly pears, cherimoyas, guavas, persimmons, blueberries, pomegranates, cranberries, olives, and a dozen kinds of nuts, to say nothing of lettuce, celery, artichokes, cauliflower, broccoli, Brussels sprouts, tomatoes, cantaloupe, watermelon, water cress, eggplant, peppers, shallots, onions, beets, carrots, parsnips, rutabagas, spinach, kale, asparagus, peas, beans, and two score or more of others.

Mr. America's Diet

All this means that not only does Mr. America now use a little more fresh fruit than he did 40 years ago but also that his likes and dislikes have changed. Thus he uses 50 pounds of citrus where he used only 16 before, and he takes only 25 pounds of apples where he took 60 pounds 40 years ago. In fact, the apple has just about changed places with citrus. On the other hand, bananas have stayed steady at about 20 pounds per person.

Among other fruits, peaches have remained constant at about 14 pounds, grapes have declined from about eight pounds to six and one-half, pears have



AMERICAN FRUIT GROWER

AMERICAN FRUIT GROWER

risen from a little above four and one-half pounds to six and one-fourth, strawberries have declined from about four pounds to two and one-half, cherries have risen from one-fourth pound to three-fourths pound, figs have held their own at about one-tenth pound, pineapples have remained at three-fourths pound, plums and prunes have declined from three to two and one-half pounds, avocados have risen from "none" to one-third pound, and cranberries have dropped from seven-tenths to three-tenths pound.

And did you know that the average Mr. America uses 21 pounds of lettuce, 12 pounds of celery, 10 pounds of snap beans, 13 pounds of carrots, 36 pounds of cabbage, 30 pounds of tomatoes, 25 pounds of onions, 10 pounds of cantaloupe, and 26 pounds of watermelon (the same amount of watermelon as of apples)?

Certainly anyone who will think for a moment must realize that the competition for the eye and the pocket-book of Mrs. Housewife is terrific. If the product offered her in one line does not satisfy, she no longer need go hungry—she just takes something else instead. This is a point that cannot be stressed too strongly. *The fruit grower of the future must grow and pack a product that will compete successfully with the many items that tempt Mrs. Housewife.*

Variety Standardization

The sixth point, accompanying this turnover in fruits, is standardization of varieties in the leading groups. It is as though in the fight for leadership the old leaders had been forced to throw all their votes to a few individuals in the group to maintain the lead!

Thus, among apples, over half the crop is supplied by the four varieties, Delicious, McIntosh, Winesap, and Jonathan. If to this list are added nine others (Rome, Stayman, York, Newtown, Baldwin, Golden Delicious, R. I. Greening, and Cortland) three-fourths of the entire crop will be included. Compare this with the 147 varieties of apples offered for sale in New York state only 30 years ago.

With the pear it is primarily Bartlett, plus a few winter sorts such as Winter Nelis, Comice, Hardy, and Bosc. With the peach it is Elberta plus an increase in earlier-ripening varieties like Redhaven, Dixigem, Triagem, Golden Jubilee, Halehaven, and Early Elberta.

Among eastern grapes Concord still leads the list, with some Fredonia, Niagara, and a limited selection of wine sorts thrown in. In the West, the dominant varieties are Thompson Seedless, the Malagas, the Tokays, and the series of wine grapes.

Among sweet cherries it is Napoleon (Royal Anne), Bing, Lambert,

Windsor, and Schmidt. For the sour cherry it is Montmorency. For the blueberry it is mainly Rubel and Jersey. *Growers must take great care in the selection of varieties for planting.*

To summarize, Mr. America is eating more than he did 40 years ago. He is tending towards more plant products than animal products. He is shifting from high energy foods to the protective foods. If he has money, he buys still more of the protective foods. Mr. America still likes fresh fruit and uses a little more than he did 40 years ago. He also uses more fresh vege-

tables, plus an ever increasing amount of processed fruits and vegetables. Yet production is more than keeping up with increased consumption.

In general the over-all outlook for the fruit industry is good. Growers must think of processing outlets in major terms, and they must think of presenting Mrs. Housewife with a quality article of the kind she wants. For the alert grower of quality fruit the outlook is indeed good; for the poor grower the outlook never was good and will become worse in the days ahead.

THE END

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M-E, What It Will Do

A booklet entitled "What Rotary Tillage Will Do For You," is now available to AMERICAN FRUIT GROWER readers. Many growers have found the rotary tiller to be indispensable for cultivating newly-planted nursery stock. This free booklet may be obtained by writing Milwaukee-Equipment Mfg. Co., 315 Marian St., South Milwaukee, Wis.

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From where I sit ... by Joe Marsh

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They set out some big shallow bowls full of nickels, dimes and pennies with a sign saying "MAKE YOUR OWN CHANGE." Works fine,

too. At the end of the day the totals are never more than a couple of cents under—or over—the right amount.

From where I sit, folks everywhere are pretty much alike, although they may seem different. Farmers and city folks, Republicans and Democrats, those who enjoy a glass of beer occasionally and those who prefer something else—we all usually try to live up to the trust others have in us.

Joe Marsh

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• **PICKING BAG**
• **CHAIN SAW**

660 S. Blvd., East, Pontiac 11, Mich., will be delighted to send you all the details.

Keep Them Out

Rabbits do millions of dollars worth of damage each year. Because of a cold winter, rabbit damage has increased and it might be wise to use "No-Nibbl," an effective rabbit repellent. The material, introduced last spring, has received wide acceptance from growers everywhere. It will not harm soil or trees and is non-injurious to rabbits, other animals, and birds. Complete directions and a description of the chemical, which can be sprayed or dusted, are available at no cost from the B. F. Goodrich Chemical Co., Rose Bldg., Cleveland 15, Ohio.

A New Chain Saw



Most growers don't need a large chain saw which is hard to handle and often very expensive. The new Wizard chain saw, manufactured by Lombard Governor, is sturdily built, weighs only 27 pounds, and sells for \$265. The company, located in Ashland, Mass., will be glad to send you all the information.

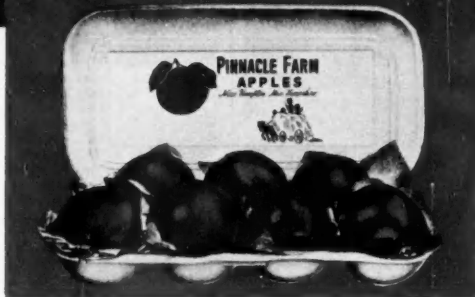
Easier and Profitable



Many growers will be interested in the Farm Easy brush mower and portable power saw. This splendid, well-constructed, self-propelled unit is ideal for cutting down trees up to 20 inches, clearing land to plant new nursery stock, and cutting cover crops close to trees. Farm Easy Products Co., Inc., Muncie, Ind., will be glad to send you all the facts.

OCTOBER, 1951

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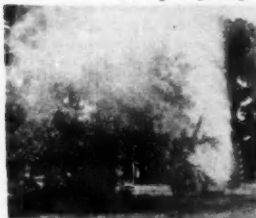
GILBERT MEISTER, Circulation Manager

106 Euclid Ave.

AMERICAN FRUIT GROWER

Willoughby, Ohio

Why Spray at a Snail's Pace?



Picture above shows HALE Centrifugal Orchard Sprayer in Treedale Orchards, Mars, Pa. turning corner at end of row with only one bank of guns turned on.

Why crawl along at 1/4 to 1 1/2 mi. per hr. when you can obtain complete outside and inside spray coverage at twice that speed with a HALE Centrifugal Orchard Sprayer?

To put it another way, a HALE Centrifugal sprayer 53 trees in 6 minutes moving at rate of 2 1/2 mi. per hr., instead of only 26 trees at 1 1/2 mi. per hr. Trees ranged in height from 18 to 20 ft. high and more. You need never operate the HALE Centrifugal Sprayer at slow as 1 1/2 mi. per hr. until trees reach 30 to 35 ft. high.

HALE Spray coverage not only appears to give even distribution of spray (as evidenced by picture at left) but microscopic examination of leaves proves its thoroughness.

Write today for circulars on HALE CENTRIFUGAL Orchard Sprayer. Please state size of Orchard or Grove.

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AGENTS

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Paint liquid on bark of trees from ground up to 4 feet. Lasts all winter and will not harm trees or rodents. Liquid TRE-TEX comes ready to apply; powder must be mixed with denatured ethyl alcohol. One quart protects 35-50 young trees.

Order from your nursery or orchard supply house. If they don't handle TRE-TEX, order direct from factory, giving us your dealer's name.

1 qt. \$1.50 1 lb. \$1.50
1 gallon 5.50 5 lbs. 6.75
(Express collect)

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MOST
VERSATILE
GARDEN
TOOL

THE ORCHARD HOME

*Homekeeping hearts are the happiest.
—Longfellow*

CIDER MAKIN' TIME

There is a time of great elation
And a call for celebration,
When the apple orchards are in prime,
It's the time for happy meetin',
Friends en neighbors all a greetin',
For it's apple cider makin' time.

When the cool winds seem a sighin'
And wild geese in V-shape flyin'
And the songbirds caroling sublime,
When the autumn sunlight dapples
Perfumed with ripe, red, mellowed apples
Then it's apple cider makin' time.

Then we brush and clean the presses
As apple pickin' time progresses,
And we feel it is an awful crime,
If the sun is not a shinin'
For we truly are a pinin'
For good apple cider makin' time.

It's fun to listen to spit en sputter,
Of Ma makin' apple butter,
But to me the best in rue en rhyme,
Is to sit in softened gloamin',
And watch the golden juice a foammin',
When it's apple cider makin' time.

For my choice of life's selection
Is the happy recollection,
And if to highest worldly fame I climb,
My old heart is ever burnin'
And my brain keeps on a yearnin'
For days of apple cider makin' time.

—Mamie Ozburn Odum

A meal is never complete without
a fruit salad. Not only are they delicious,
but they have a lot of eye appeal.

MILLIONAIRE SALAD

- 1 pound marshmallows
- 1 pound white grapes
- 1 No. 1 can sliced pineapple, chopped
- 1 cup sugar
- Juice of one lemon
- 1 egg, beaten
- 1 cup cream, whipped

Bring to a boil sugar, lemon juice, and beaten egg on low heat. When cool, add whipped cream. Combine all ingredients and chill for one day in refrigerator to thicken. Serve on crisp salad greens and garnish with maraschino cherries.—Mrs. Henry Thompson

Here is an excellent suggestion from Mrs. Kelso for merchandising fruit at your roadside stand.

FRUIT CUSTOMERS LIKE RECIPES, TOO

I have found it a good practice to supply customers with recipes for using the various kinds of fruit which we sell at our roadside stand. Also, when canning, I prepare a few small jars of jam, jelly, preserves, pickles, etc., to keep at the stand. These are not for sale but are used for "samples" and display purposes. Customers like to see or taste the product that can be made from the fruit they are buying.

One question which buyers ask me most often is: "Will these crab apples cook to pieces?" It is a simple matter to have on hand small glass jars labeled with the variety and filled with spiced or pickled crabs. "Seeing is believing" in this case.

Another question I am frequently asked is: "How many quarts, or pints, or glasses of jelly, will I get from this much fruit?" A little research when doing my own canning, as well as a study of the charts in canning cookbooks, has made this an easy one to answer. Once I learned a lesson in being specific when I failed to ask a customer whether she pitted her pie cherries or canned them whole!

I made several copies of my proven fruit recipes during the quiet winter months, proofreading the typed recipes carefully or customers may not return the second year!

—Mrs. Mildred Kelso

Mrs. W. H. Dillard, Nebraska, Ind., sends along an excellent dessert recipe.

FRUIT MARVEL

- 1 cup malaga grapes, cut in halves
 - 1 cup sliced bananas
 - 1 cup finely sliced pineapple
 - 1 cup pitted, chopped dates
- Pour the following sauce over the above mixed ingredients:
- $\frac{3}{4}$ cup plain gelatin
 - 1 cup cold water
- Dissolve the gelatin in the cold water, then add:
- 1 pint boiling water
 - $\frac{1}{2}$ cup sugar
 - Juice of 1 lemon
- Pour this mixture over the fruit and place in the refrigerator to chill. Serve with whipped cream.

During the winter months there is nothing better than jelly used either as a garnish or spread.

AUTUMN JELLY

- 6 ripe tomatoes
- 6 medium sized cooking apples
- 2 pounds under-ripe blue grapes
- $\frac{1}{2}$ cup water
- Sugar

Wash fruit, slice tomatoes and apples, and mash grapes. Combine fruits and water and cook over moderate heat 15 minutes. Strain through cloth. Add 1 cup sugar for each cup juice and boil rapidly 10 minutes or until syrup sheets from spoon. Turn into hot sterilized jars: cool, seal with paraffin, and store in a cool place.—Mrs. Ray Prisky

W. V. Cruess and Florence Pen are the authors of an interesting little bulletin entitled "Homemade Fruit Candies." Included in it is information on equipment needed for making candy, different processes used to make your candies look professional, and many, many, tasty recipes. I know you will all want a copy, so why not write the California Agricultural Extension Service, The College of Agriculture, University of California, Berkeley, and ask them for Circular 175, "Homemade Fruit Candies."

Why not send your fruit-growing experience stories, recipes, and poems to the Orchard Home Editor, American Fruit Grower, 106 Euclid Ave., Willoughby, Ohio. All contributions for the December issue should be in our hands by November 1.

CALENDAR OF COMING MEETINGS AND EXHIBITS

Oct. 3-5—Florida Fruit and Vegetable Association annual convention, Sherry Frontenac Hotel, Miami Beach. Association headquarters: 29 South Court St., Orlando, Fla.

Oct. 8-12—National Safety Council 39th congress and exposition, Chicago.—R. L. Forney, General Sec'y, 425 N. Michigan Ave., Chicago 11, Ill.

Oct. 25-Nov. 3—National Apple Week. Display material available on request.—National Apple Week Assn., Inc., 184 East Ave., Rochester 4, N.Y.

Oct. 30-Nov. 1—Florida State Horticultural Society 64th annual meeting, West Palm Beach.—Ernest Spencer, Sec'y, Bradenton.

Nov. 5-6—Western Wisconsin-Minnesota Fruit growers annual meeting, La Crosse Hotel, La Crosse, Wis.—H. J. Rahmlow, Sec'y, Madison, Wis.; J. D. Winter, Sec'y, Mound, Minn.

Nov. 29-30—Oregon State Horticultural Society 65th annual meeting, Oregon State College, Corvallis.—C. O. Rawlings, Sec'y, Corvallis.

Dec. 2-5—New Jersey State Horticultural Society annual meeting, in conjunction with Vegetable Growers Association of America annual convention, Atlantic City.—Arthur J. Farley, Sec'y, Hort. Society, New Brunswick.

Dec. 3-5—Washington State Horticultural Society annual meeting, Wenatchee.—J. C. Snyder, Sec'y, Pullman.

Dec. 4-5—Kansas State Horticultural Society annual meeting, Manhattan.—H. L. Drake, Sec'y, Bethel.

Dec. 6-7—Connecticut Pomological Society annual meeting, Bond Hotel, Hartford.—S. P. Hollister, Sec'y, Storrs.

Dec. 11-13—Illinois State Horticultural Society 96th annual meeting in conjunction with annual meeting Illinois Fruit Council, Broadview Hotel, East St. Louis.—H. B. Hartline, Sec'y, Carbondale.

1952 Meetings
Jan. 4-6—United Fresh Fruit and Vegetable Association annual convention, Hotel Cleveland, Cleveland, Ohio.—H. A. Seelig, 2017 S. Street, N.W., Washington 9, D. C.

Jan. 7-9—American Pomological Society annual meeting in joint session with Virginia State Horticultural Society 56th annual meeting, Hotel Roanoke, Roanoke, Va.—W. D. Armstrong, Sec'y, APS, Lexington, Ky.; John F. Watson, Sec'y, Va. Society, Roanoke, Va.

Jan. 15-17—New York State Horticultural Society 97th annual meeting, Rochester.—D. M. Dalrymple, Sec'y, Lockport.

Jan. 16-18—Indiana Horticultural Society annual meeting, Mural Temple, Indianapolis.—Ray Klackie, Sec'y, West Lafayette.

Jan. 22-24—New York State Horticultural Society eastern meeting, Kingston.—D. M. Dalrymple, Sec'y, Lockport.

Jan. 29-31—New Hampshire Horticultural Society 55th annual meeting in conjunction with annual Trade Show, Putnam Hall, University of New Hampshire, Durham.—Daniel R. Batchelder, Sec'y, Wilton.

Feb. 20-22—Ohio State Horticultural Society 105th annual meeting, Cleveland Hotel, Cleveland.—C. W. Ellenwood, Sec'y, Wooster.



APPLES

so GOOD for you!

NATIONAL APPLE WEEK OCT 25-NOV 3



APPLE PIE

Always a treat...
with ice cream!

NATIONAL APPLE WEEK OCT 25-NOV 3

These two attractive posters have been designed to stimulate local and national consumption of the King of Fruits during National Apple Week, October 25 through November 3, with Halloween the traditional National Apple Day. The poster featuring a large red apple is 13 1/2 x 28 inches, the one illustrating apple pie and ice cream, 8 1/2 x 28 inches. Both are available on request to National Apple Week Association, 154 East Avenue, Rochester 4, N. Y.

OCTOBER, 1951

ATKINS



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There is an entire "family" of Atkins Pruning Saws—models designed to fit your specific needs—models to do a better job, regardless of kind of orchard or types of trees! For example, the Folding Pruner (right) carries easily in your pocket—because the lacquered hardwood handle folds over the carefully tempered hook back pug teeth. Ask to see it—**No. A-19 FOLDING PRUNER**



No. 16—"Silver Steel" blade, pug teeth, adjustable to cut at any angle—accommodates pole of desired length.

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OF AMERICAN FRUIT GROWER, published monthly at Willoughby, Ohio, for October 1, 1951.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, American Fruit Grower Publishing Company, 106 Euclid Ave., Willoughby, Ohio; Editor, R. T. Meister, 106 Euclid Ave., Willoughby, Ohio; Managing Editor, None; Business Manager, E. G. K. Meister, 106 Euclid Ave., Willoughby, Ohio.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.) American Fruit Grower Publishing Company, 106 Euclid Ave., Willoughby, Ohio; E. G. K. Meister, 106 Euclid Ave., Willoughby, Ohio; Elsie K. Meister, Gates Mills, Ohio; Edward L. Meister, 106 Euclid Ave., Willoughby, Ohio; R. T. Meister, 106 Euclid Ave., Willoughby, Ohio; Gilbert Meister, 106 Euclid Ave., Willoughby, Ohio.

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RICHARD T. MEISTER, Editor.

Known to and subscribed before me this 7th day of September, 1951.

(Seal) H. WILLKOM, Notary Public.
(My commission expires Nov. 16, 1953)

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WANTED—UNIMPROVED FARM, RATHER CHEAP. HERBERT AYER, R-1, Newtown, Ohio.

NUT GROWERS NEWS

A Grand Meeting

"JUST a note of thanks to all the hard-working nut men who put on the big NNGA show. I had a marvelous time—never met a nicer bunch of fellows. Thanks also to University of Illinois for use of their grand facilities."

This note from C. F. Ladwig, Beloit, Wis., echoes the comments of other new members and many who have attended for decades, as the 42nd annual meeting of the Northern Nut Growers Association was concluded August 30-31 with a tour of two Illinois valley nut orchards, following three days on the Urbana campus. The record attendance was well over 100.

The 1952 meeting will be held the week before Labor Day at Rockport, Ind., and will be presided over by the association's new president, Dr. L. H. MacDaniels of Cornell University's department of floriculture and ornamental horticulture.

New Breeding Program

The new vice-president is Richard B. Best, whose farm at Eldred, Ill., was visited during the tour. Besides managing one of the Midwest's largest hybrid corn seed establishments, he has over a period of 12 years topworked some 4,000 native pecan trees, the production from which is now making a commercially successful sideline of what started out as a hobby. He has 45 varieties of northern pecans and hicans. Like commercial pecan growers farther south, he sows legumes and grasses in his groves for rotated hog pasture.

Some of the corn breeders' technique is being utilized in a new project by Mr. Best—colchicine treatment to double the chromosomes in seedlings of the better named pecans and hicans (each has 32 chromosomes) as a preliminary to crossing them with the tetraploid (64 chromosomes) mockernut and sweet pignut hickories which thrive under more adverse conditions of soil and climate. Several seedlings treated this spring have branches in which a tetraploid condition is indicated. These will be topworked on larger trees to hasten their fruiting.

The new treasurer is Carl F. Prell, 1414 E. Colfax Ave., South Bend 17, Ind. J. C. McDaniel, extension pomologist at the University of Illinois, Urbana, was re-elected secretary.

Quality Chestnuts Available

A symposium on nut propagation methods centered on the Chinese



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An advertisement of The B. F. Goodrich Company, Akron, Ohio.

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chestnut. The three USDA named varieties—Nanking, Kuling, and Meiling—plus the privately introduced Abundance, are available in quantity from several nurseries this fall.

Planters of chestnut trees will be interested in a report on the training of young trees by Drs. H. L. Crane and J. W. McKay of the USDA, who find that early and severe pruning retards growth and bearing of Chinese chestnuts even more than it does apple trees. They advise allowing the lowest limbs to grow from the trunk at around two feet above the ground, at least until fruiting is established.

Prize Winning Persians

Much interest was shown in the report by Spencer B. Chase of TVA, Norris, Tenn., on the recently concluded prize contest for hardy seedling Persian walnuts. Grafting of several of the best seedlings in this contest has begun and trees will be available from nurseries in 1952-53.

The \$25 first prize winner is a Carpathian strain tree, one of eight seedlings grown by Mrs. Ward H. Metcalfe, Five Mile Line Road, Webster, N.Y. (Her husband is an orchardist and she bought the seeds from the Wisconsin State Horticultural Society after seeing an AMERICAN FRUIT GROWER announcement some 15 years ago.)

The next four prizes and first honorable mention were taken by seedling walnuts from Ohio, three of them Carpathians. Sylvester Shessler, Genoa, Ohio, entered the second prize seedling (now named Hansen) as well as the fourth prize one (called Jacobs). Hansen and Jacobs are not Carpathians, but are hardy.

Other Carpathian nuts collected by the Rev. Paul C. Crath produced the third prize tree (McKinster, owned by Ray McKinster, 1632 South 4th St., Columbus 7, Ohio), as well as the fifth place winner (from Lewis Weng, Route 5, Dayton, Ohio), and the highest ranking one among nuts given honorable mention (A. C. Orth, also of Route 5, Dayton).

Another one winning honorable mention is a seedling of Crath No. 10, planted at the University of Illinois Experiment Station in 1937. Formerly called Illinois 10, it has just been named Colby in honor of Professor A. S. Colby. Limited quantities of Colby walnut scion wood will be available this winter to nurseries and experimental propagators. It is suggested for trial in other places resembling Illinois in climate.

Annual membership in NNGA is \$3 which includes a complete report of the meeting.—J. C. McDaniel, Sec'y, Hort. Field Lab., Urbana, Ill.

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American FRUIT GROWER



RICHARD T. MEISTER, Editor,
Associate Editor, H. B. TUKEY

America's Only "NATIONAL FRUIT MAGAZINE"

The Climb Is Getting Tougher But Steadier!

THE IDEA of the chain of supply reaching from the producer to the consumer is a good one. You can't push with a chain, but you can pull with it. And so Mrs. Housewife is the key to the situation when she starts pulling at the consumer end of the chain and begins the movement of fruit from production to consumption.

The idea is good, too, that envisions the production end of the chain like the free end of a thrashing rope. It thrashes up and it thrashes down. Like the loose cannon in Victor Hugo's "Toilers of the Sea" it beats insanely and monstrously and no one seems able to catch it and control it.

Perhaps we are trying to do the job too fast and by some too-simple technique. A difficult problem is seldom solved by one device alone. Yet somehow this thrashing end of the chain must be gotten under control. And no one will do it but the grower himself.

It seems logical that every time the grower can get a little firmer grasp or creep up a little farther, the more likely he is to control. For example, the move into organization and into co-operatives puts more weight on the thrashing end.

Also, the trend for packing houses and co-operatives to go into the processing business is right. It makes possible putting fancy grades into fancy fresh fruit channels and other grades into frozen slices, canned products, juice, and the like. It adds just another weight onto the thrashing chain.

How much farther growers climb along the chain depends on a lot of things—ability, leadership, co-operation, and finance, among them. Of these, finance may be most serious. Yet, in order to control a product, it must be owned in some form or fashion. Already fruit is being financed through production, harvesting, and processing. But when it comes to wholesaling, jobbing, distributing, merchandising, and retailing, the job looks almost too big to handle.

It probably is too big if taken all at once. Perhaps there are certain commodities, like cranberries, or red cherries, or blueberries that lend themselves to this technique. Or perhaps it is certain geographical locations, like the Colorado peach deal.

No matter where the beginning is made, nor how small the achievement seems to be, it all adds weight on the thrashing end of the chain and helps to ward off the blows that fall now all too frequently and too painfully. Parathion, DDT, and a few other blessings now give us the chance to put more of our energies and abilities in this direction. It looks as though we are already making some progress. Let's keep it up!

Florida Cheesecake

WORD FROM Florida is that the newest wrinkle in the race for the frozen concentrate market is bathing beauty decorated fruit juice cans. The Floridians are great promoters but here they have gone off the deep end. Apples, peaches, and pears may well laugh at the plight of their citrus cousins who are forced to rely on old-fashioned "cheesecake" to make sales rather than on their own natural goodness.

Fruit Production at a Glance

	1940-49	1950	USDA Sept. 1, Est. 1951
	Thousand Bushels		
Apples:	109,033	123,126	119,892
Eastern	46,016	57,118	58,944
Central	19,092	17,947	23,579
Western	43,926	48,061	37,369
Peaches	71,150	53,485	68,703
Clng., Calif.	19,019	19,668	23,460
Free., Calif.	11,159	10,000	10,793
Pears	31,008	31,140	31,393
	Tons		
Apricots	220,120	215,100	176,600
Plums	82,530	82,500	101,500
Prunes, (dry) Calif.	187,200	149,000	181,000
Grapes	2,797,000	2,707,400	3,165,500
	Barrels		
Cranberries	728,200	984,300	915,000

Fruit Talk

A pretty statement, characteristic of a perennially young man who celebrated his 75th birthday anniversary last spring and who understands true values of life, is: "Yes, as you say, this is the time when blossoms burst. Sour cherries and sweet cherries are in bloom almost together. Apples are nearly with them. Spring is here in earnest. It is one of the most remarkable demonstrations of resurrection that one can see. It comes every year, sometimes with a greater display of glory than at other times, but always it comes."
—Sam Fraser.

A valuable new addition to the literature on the **Malling apple rootstocks** is from **France**—89 pages, with the rootstocks pictured in leaf, shoot, entire plant, and dormant twig, and giving characters for identification, published by the National Federation of French Horticulturists and Nurserymen. The **American Association of Nurserymen** adopted a resolution at the New Orleans meeting commending the **Department of Agriculture of Michigan and Michigan State College** for having set up a system of certification of the Malling rootstocks. Prices of trees on these rootstocks are coming within reach of orchardists.

The many readers with friends in England and who know **Christopher Norbury**, prominent fruit grower of **Malvern**, and **Dr. T. Wallace**, the distinguished director of the **Long Ashton Research Station**, will enjoy this personal note from "Kit" Norbury: "I met Tom Wallace last week at the **National Fruit Trials at Wisley**. He had a great day and was able to point out such deficiencies as magnesium, manganese, zinc, and copper, and several new viruses in apples which keep cropping up. The research worker will always be busy and needed, with all these things coming along, to the dismay of the grower!"

If you wonder why **Rome** is a good apple for **Indiana**, figures from the **Simpson Orchard Company of Vincennes** may explain. In round numbers, the **Gallia** variety yielded 24,000 bushels on a 35-acre block for 1939 to 1945, the total sales being \$53,000. For the period 1941 to 1945 the figures were 21,000 bushels and \$50,000. By contrast the **Turley** variety yielded 16,000 and 14,000 bushels respectively valued at \$29,000 and \$28,000, and the **Starking** variety produced 11,000 bushels for both periods with values of \$26,000 and \$25,000 respectively.

Winston Churchill at 26 years of age recorded a bit of philosophy for himself that could be used to advantage by fruit growers from **British Columbia to Florida** and from **Quebec to San Diego**. "Make up your mind what you want to do, and remember that every action has consequences that affect the goal."
—H.B.T.

Coming Next Month

- Take a Fruit's Eye View When You Build Your Storage
- From Bank Barn to Cold Storage
- Apple Bruising—No. 1 Sales Killer
- Fork Lift Trucks Are Big Labor Savers

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Whatever you haul, Chevrolet has the best truck buy for you—in pick-ups, panels, platforms, stakes, conventional and C.O.E. chassis for special bodies. Your Chevrolet dealer is on the job to help you. Stop in and talk over your truck needs with him. Chevrolet Division of General Motors, Detroit 2, Michigan.

(Continuation of standard equipment and trim illustrated is dependent on availability of material.)



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ARE YOU GETTING YOUR SHARE OF THESE Bigger Apple Profits?

Growers of STARK GOLDEN DELICIOUS, red STARKING DELICIOUS Apples, and OTHER Stark Fruits report MORE bushels-per-tree. MORE dollars-per-bushel—often as much as 50% more! How much would you like to increase YOUR fruit profits?

WOULD you like to net at least \$100 or \$200 MORE per acre than you are now getting from your ordinary apple trees? Would you like to have trees that bear years YOUNGER, bear HEAVIER, and bear big crisp beauties that command TOP PRICES on today's market? Would you like to discover how the BIG money is being made today not only in apples, but also in peaches, plums, pears, cherries, scots, grapes, berries?

Then you owe it to yourself to join the

fruit growers who are enjoying a year-after-year of steady prosperity with their STARK Fruit Trees... such as STARK GOLDEN DELICIOUS and red STARKING DELICIOUS Apples!

STARK GOLDEN DELICIOUS is 50% larger than many other yellow apples, and has already been picked from 2 year trees in 18 states. STARKING DELICIOUS is a 100% red apple that ripens all over several weeks earlier than Delicious, while still hard-ripe. Both apples keep all winter, and are of such unusual size and flavor that they command top market prices year after year.

What Growers Say about These Great Apples

"I have a Stark Golden Delicious tree 2 years old that has 40 or 50 apples on it!"—William Robinson, Washington.

"In spite of the coldest, most prolonged cold winter on record in our section—in spite of late spring frosts, causing other varieties in our orchard to fail—in spite of the hottest summer with the most severe and longest drought—in the memory of our oldest inhabitant, Stark Golden Delicious came through and produced a bumper crop of big, smooth, beautiful apples which we sold for \$6-400 right in our orchard."—Kings Springs Orchard, Ill.

"My 500 Stark Golden Delicious 10 years old will harvest 12,000 bushels, I market them at 50¢ to 100¢ more than others."—E. F. Burgett, Ohio.

"We had four successive years while Stark Golden Delicious were

U. S. Dept. of Agriculture Report for Chicago Market (May 11) lists Starking Delicious, Extra Fancy, at \$7.00 per bushel box—MORE than any other variety listed!

blooming. Some clusters were so frozen that the spur died back to the limb, yet they produced a crop!"—W. O. Smith, Kentucky.

"I got 50% higher prices for my Starking Delicious apples than for Delicious. All my customers think the flavor and color simply wonderful."—Philip Westburn, Iowa.

"My Starking Red Delicious and Stark Golden Delicious trees are loaded. Some Starking trees average 13 to 14 bushels and they are heavier. I picked Starking that graded 64 to the bushel and even now (Sept.) they are bright red all over. That's the advantage Starking has over old Delicious—colors early and gets the high prices for the first Red Delicious on the market. The all-over-red Starking color makes them bring 15¢ to 40¢ more than Delicious year after year."—Frank Penetone, Ill.

Why STARK Apples, Pears, Plums, Cherries, Peaches, Berries, Are More Profitable

Everything the Stark family has learned in its 136 years of producing MORE SUCCESSFUL nursery stock goes into each tree we sell.

1. Each Stark fruit tree is a Record-Bearing strain propagated direct-in-line from a champion "patent" tree that has established an UNBATTEN RECORD for heavier bearing, or younger bearing, or larger-sized fruit, or better colored fruit, or a combination of these superior traits.

U. S. DEPT. OF AGRIC. — CHICAGO MARKET — MAY 11
APPLES: STARKING DELICIOUS, EX. FANCY
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2. Our famous trademarked "OLD OAK PROCESS" method of grafting onto a special whole root instead of a piece-root gives your new Stark trees a big "head start"—makes them stronger, younger-bearing, longer-living.

3. As the largest nursery in the world, we can spend a fortune in research for you. We have huge Test Orchards where 1000 new fruit varieties are studied—where a new variety must come through with "flying colors" before it is offered to YOU.

4. We are exclusive propagators and distributors of LUTHER BURBANK'S new and patented fruit creations.

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If you want to find out more about the EXTRA-PROFIT POSSIBILITIES—not only of Stark's apples, but also of our improved peaches, pears, plums, cherries, berries, and grapes—mail coupon below for our brand-new FREE catalog. This big book (over 1 foot long) shows glorious natural color photos of all our money-making fruit varieties—and our beautiful shade trees, shrubs, and roses too. ALL FREE, if you mail coupon at once: our valuable Home Landscaping Book, showing how to add outdoor beauty and increased sales value to your home. Mail coupon NOW!

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Turn your spare time into cash! Introduce famous Stark Super-Quality Varieties in your locality. Easy, pleasant work during evenings, Saturdays, any time. No experience needed. Everyone knows Stark Bros.' World's Largest Nursery, founded 136 years ago. Get big, colorful money-making sales outfit FREE. Shows you how to start earning first day you try. CHECK COUPON, and mail today!

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Big Earnings in Spare Hours

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